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July 2016

Proposed Resource Management Plan and Final Environmental Impact Statement

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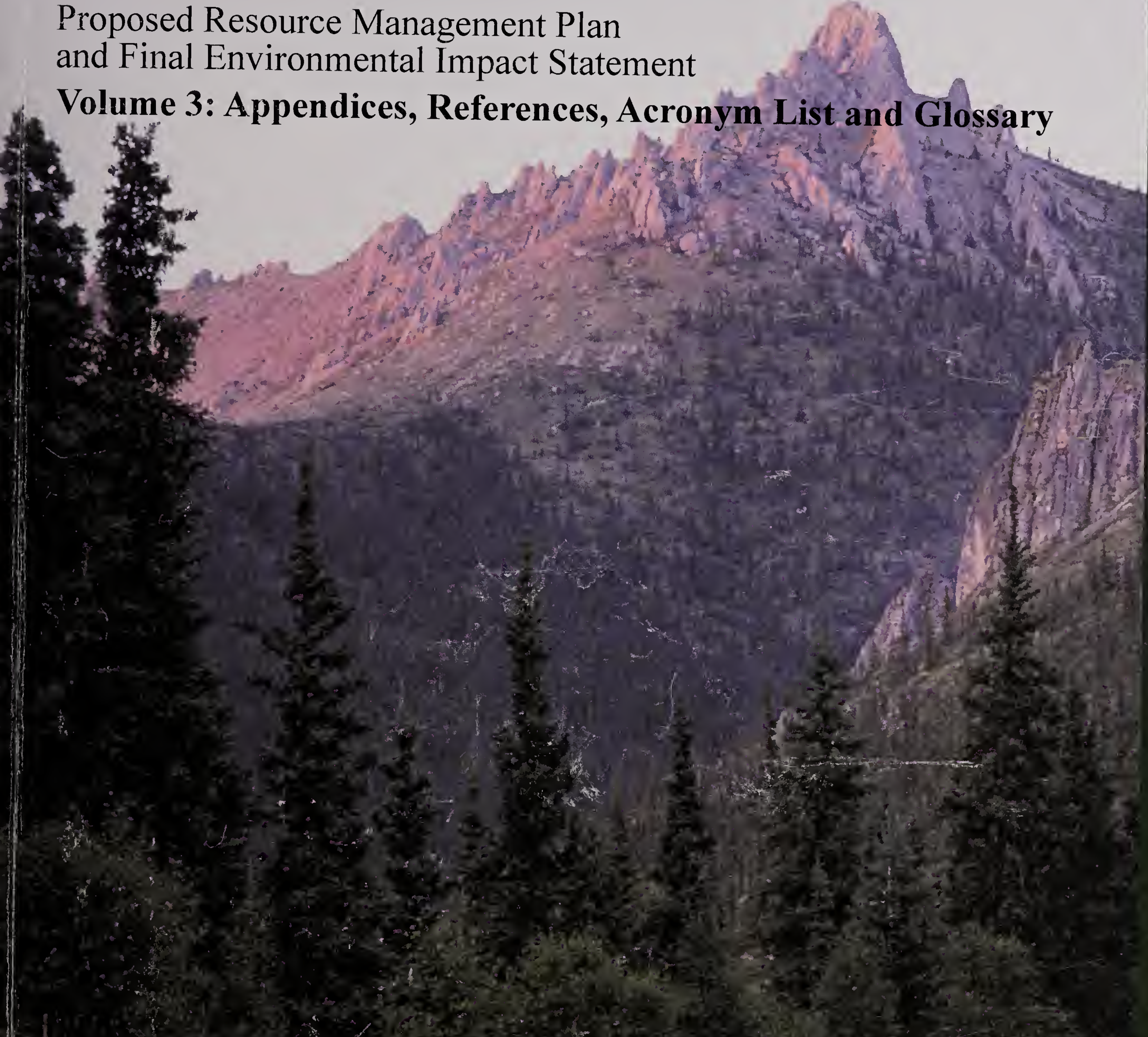

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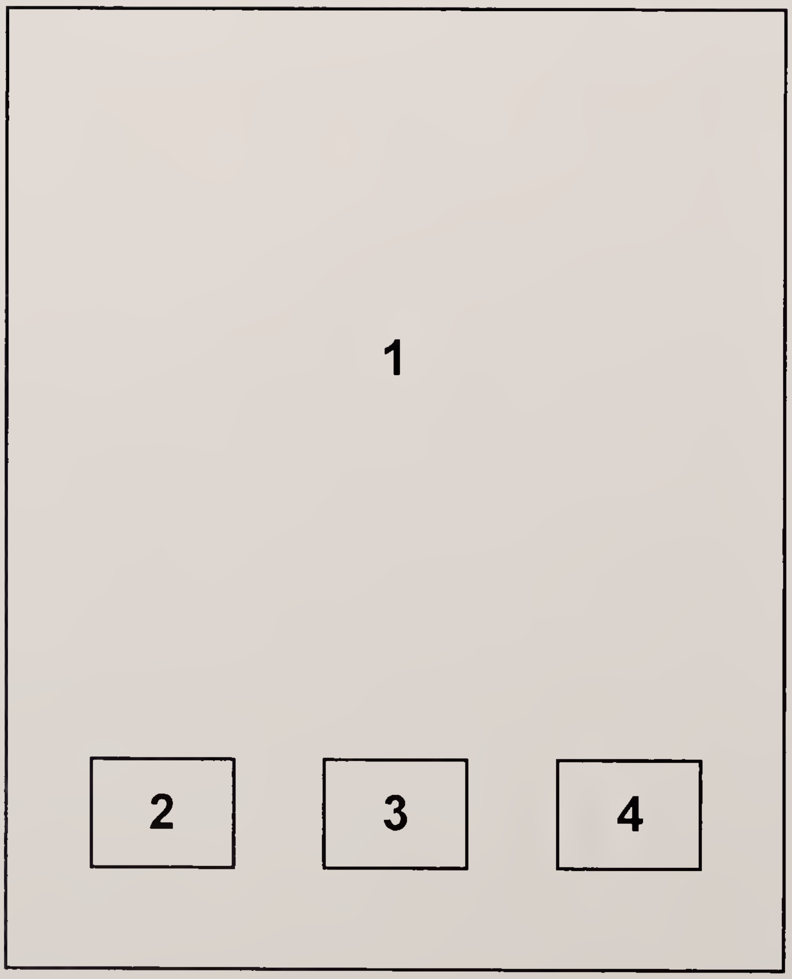

BLM Cover Photos:

1. Alpenglow on the White Mountains, Beaver Creek Wild and Scenic River, Alaska.
2. Steele Creek Roadhouse, Fortymile Wild and Scenic River, Alaska.
3. Dall Sheep at mineral lick near Lime Peak, White Mountains National Recreation Area, Alaska.
4. Mining operation on Walker Fork in Fortymile mining district, Alaska.

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Eastern Interior

Proposed Resource Management Plan and Final Environmental Impact Statement

Volume 3

Appendices
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References

Prepared by the

U.S. Department of the Interior
Bureau of Land Management-Alaska
Eastern Interior Field Office

July 2016

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Appendix A

Standard Operating Procedures and Fluid Mineral Leasing Stipulations

Appendix A. Standard Operating Procedures and Fluid Mineral Leasing Stipulations

A.1. Introduction

The BLM has developed guidelines to protect resources called "Standard Operating Procedures" (SOPs) and "Fluid Mineral Leasing Stipulations" (Leasing Stipulations) as part of this planning process. These guidelines were guided by the standards and guidelines included in the Alaska Statewide Land Health Standards (IM AK 2004-023) and by the goals outlined in this RMP/EIS. The SOPs are requirements, procedures, management practices, or design features that the BLM will use to protect resources. Leasing Stipulations are requirements to reduce impacts to natural resources from fluid mineral exploration and development. The SOPs and Leasing Stipulations generally do not restate requirements that already exist in regulations or laws, including state laws. Regulations or laws may require conditions that are more stringent than those presented in this section. The Chapter 6 of the *Analysis of the Management Situation for the Eastern Interior RMP* (BLM 2009) includes a list of mandates and authorities pertaining to federal lands.

A.1.1. How to Read this Appendix

This appendix includes a list of all the SOPs considered in the Draft RMP/EIS, Supplement to the Draft RMP, and Proposed RMP/Final EIS. In the Draft RMP/EIS, these guidelines were referred to as Required Operating Procedures (ROPs). In this Proposed RMP/Final EIS document these measures are renamed as Standard Operating Procedures (SOPs). Section A.1.2 describes what SOPs are and how they apply to BLM authorized actions. Section A1.3 describes what Fluid Mineral Leasing Stipulations are and what the process is for exceptions, modifications, or waivers to the stipulations.

Section A.2 lists the SOPs considered in the Draft RMP/EIS which are applicable to Alternatives B–D. Section A.3 lists additional SOPs considered in the Supplement to the Draft RMP/EIS. These apply only to Alternative D. The assumption for impact analysis in the Final EIS is that these SOPs would apply to Alternatives B–D.

Section A.4 lists SOPs considered in the Proposed RMP/Final EIS applicable to **Alternative E (Proposed RMP)** . The assumption for impact analysis in the Final EIS is that these SOPs would apply to Alternative E.

Section A.5 lists Fluid Mineral Leasing Stipulations applicable to all action alternatives in both the Draft RMP/EIS and Proposed RMP/Final EIS. Lastly section A.6 lists Hardrock Mineral Leasing Stipulations that were considered in the Supplement to the Draft RMP and are applicable to Alternative D only.

A.1.2. Standard Operating Procedures

Standard Operating Procedures (SOPs) apply to all actions, whether implemented by the BLM or authorized by the BLM and implemented by another individual, organization or agency on public land. These were based on the best information available during development of the RMP/EIS.

The BLM will apply the SOPs to BLM actions and BLM-authorized activities including, but not limited to: FLPMA leases and permits; Special Recreation Permits; oil and gas activities; renewable energy activities; mining Plans of Operation; and, authorizations for rights-of-way. For fluid mineral leasing activities, SOPs would apply in addition to the Standard Lease Terms and Leasing Stipulations. Only those SOPs concerning resources that are potentially affected by the action will be applied to authorized permits and authorizations. For example, SOPs protecting caribou habitat would not apply to projects that are not located in caribou habitat. The SOPs may be modified through site-specific analysis of subsequent authorizations, but still must meet the goals and objectives of the RMP. SOPs will continue to evolve as better resource information is gained and/or changes in technology become available. Modifications to SOPs may be appropriate if other measures are taken to protect resources that would result in the same or reduced impact.

SOPs are considered during the site-specific analysis that occurs during activity level planning and if adopted, are applied as conditions of approval to land use authorizations and permits. SOPs are not selected as a condition of the permitted activities if the applicant has included them as part of the proposal or has identified an alternative, such as adoption of an acceptable best management practice (BMP) to meet stated resource management objectives. Applicants are encouraged to consider alternative methods, best management practices, and/or design features for BLM's consideration during the permitting process. If an applicant does not include alternatives for agency consideration, the SOPs identified will be incorporated into an approval for a proposed activity.

The Authorized Officer (AO) or their representative is responsible for ensuring that the intent of the SOPs presented in this RMP/EIS are followed and that permittees comply with the conditions of their authorization. Non-compliance will be documented and a notice will be sent to the permittee, along with corrective actions and a time frame in which the actions are to be completed.

A.1.3. Fluid Mineral Leasing Stipulations

Fluid Mineral Leasing Stipulations (Leasing Stipulations) are specific to fluid mineral activity, including exploration, development, and production. These Leasing Stipulations are included in a lease in addition to the Standard Lease Terms. Fluid minerals include oil and gas, geothermal, and coal bed natural gas. Leasing Stipulations constitute significant restrictions on the conduct of operations under a lease.

Additional site-specific Leasing Stipulations may be added, if determined necessary, through further analysis. Since no fluid leasing is assumed during the life of this plan, leasing may only occur following additional NEPA analysis. Additional stipulations may be developed at that time.

Leasing Stipulations may be excepted, modified or waived by the AO pursuant to 43 CFR 3101.1-4 and WO-IM-2008-032. The environmental analysis prepared for fluid mineral development (such as Applications for Permit to Drill or sundry notices) will address proposals to except, modify, or waive a Leasing Stipulation. To except, modify, or waive a stipulation, the environmental analysis would need to show that: 1) the circumstances or relative resource values in the area had changed following issuance of the lease; or 2) less restrictive requirements could be developed to protect the resource of concern; or 3) operations could be conducted without causing unacceptable impacts; or 4) the resource value of concern does not occur within the lease area. An exception exempts the holder of a lease from the Leasing Stipulation on a one-time basis. A modification changes the language or provisions of a Leasing Stipulation, either temporarily or for the term of the lease. A waiver permanently exempts the Leasing Stipulation.

Compliance with Leasing Stipulations is monitored by the AO or their representative. Non-compliance may result in monetary fines or operation shut-down.

A.1.4. Standard Lease Terms

All fluid mineral leases will include the Standard Lease Terms contained in BLM Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, October 1992 or later addition. The Standard Lease Terms provide the lessee the right to use the leased land to explore for, drill for, extract, remove, and dispose of fluid mineral deposits located under the leased lands. The Standard Lease Terms also require that operations be conducted in a manner that minimizes impacts to the land, air, water, cultural, biological, and visual elements of the environment, as well as other land uses or users.

A.2. Standard Operating Procedures Considered in the Draft RMP

The following standard operating procedures were considered in the Draft RMP and would apply to Alternatives B–D.

A.2.1. Cultural and Paleontology

SOP C-1 For permitted activities, cultural resource protection and conservation will be consistent with 1) “Sections 106” [historic property protection, see 54 USC 306108], “Section 110” [inventory, see 54 USC 306102(b)(1)], and “Section 101d” [assisting Indian tribes, see 54 USC 302701]of the National Historic Preservation Act (1966, as amended); 2) procedures under BLM’s 2012 National Programmatic Agreement for Section 106 compliance or its successor agreement; and, 3) the 2014 Protocol for Managing Cultural Resources in Alaska between BLM Alaska and the Alaska State Historic Preservation Officer (SHPO) or its successor agreement.

SOP C-2 Mitigation measures will be considered for all actions that may potentially affect cultural resources. If the AO determines mitigation measures are necessary to protect and conserve known cultural resources, a SHPO approved mitigation plan will be implemented by the AO. Mitigation plans will be reviewed per “Section 106” of the National Historic Preservation Act [54 USC 306108] for National Register of Historic Places eligible or listed properties. The extent and nature of recommended mitigation will be commensurate with the significance of the cultural resource involved and the anticipated extent of the damage. Costs for mitigation will be borne by the land use applicant.

SOP C-3 The BLM will evaluate the impacts of proposed actions to known paleontological resources. If damage to known significant paleontological resources cannot be avoided, the applicant (or the BLM for internal actions) will perform scientific examination of the impacted significant paleontological resources followed by mitigation approved by the AO. This may include the professional collection and analysis of significant specimens by scientists.

A.2.2. Fish and Aquatic Species

SOP FA-1 No road crossings will be permitted in priority fish species spawning habitat, unless no feasible alternative exists.

SOP FA-2 New, replacement, and reconstructed stream crossing structures (such as bridges and culverts) will be designed to:

- Accommodate a 100-year flood event, including bedload and debris;
- Maintain fish and aquatic organism passage;
- Maintain channel integrity;
- Accommodate mean bankfull channel widths; and,
- Incorporate adjacent reclamation (such as willow cuttings, wattles, brush layering) on the disturbed areas up and downstream of the abutments.

SOP FA-3 Application of pesticides and other toxicants will occur in a manner that does not prevent or retard attainment of desired conditions or adversely impacts priority aquatic species.

SOP FA-4 Drilling is prohibited in fish-bearing rivers and streams, as determined by the active floodplain; and fish-bearing lakes, except where the applicant can demonstrate on a site-specific basis that impacts would be minimal or it is determined by the AO that there is no feasible or prudent alternative.

SOP FA-5 When feasible, all water intakes will be screened and designed to prevent fish intake.

SOP FA-6 Reclamation plans for the rehabilitation of fish habitat as required under 43 CFR 3809.420(b)(3)(ii)(E) will focus on three objectives. Typically, these requirements would be satisfied through the development of a site-specific reclamation plan and on achievement of reclamation objectives. Bond release would be based on meeting specific measurable objectives outlined in a monitoring plan (43 CFR 3809.401(b)(3)). These objectives are:

1. Provide a stable channel form that is in balance with the surrounding landform such that channel features are maintained and the stream neither aggrades nor degrades. To achieve this, it will be necessary to design a post-mining stream channel using morphological characteristics of the pre-disturbance channel and floodplain (such as bankfull and floodprone dimensions, meander patterns, design flows and velocities, riffle-to-pool ratios, substrate particle sizes, and so on); which could be derived from field surveys of the area, remotely sensed information, and/or information from adjacent watersheds that exhibit similar characteristics as the watershed proposed for mining.
2. Provide sufficient riparian vegetation or anchored rocks/logs to effectively dissipate stream energy, prevent soil erosion, stabilize streambanks, provide essential nutrient input, and maintain water quality and floodplain function.
3. Provide instream habitat complexity similar to that of pre-disturbance levels through the use of instream structures (such as vortex rock weirs, cross-vane structures, and installation of root wads).

SOP FA-7

Within Riparian Conservation Areas and the Salmon Fork ACEC, baseline hydrological data adequate to characterize the seasonal flow patterns and discharge will be required prior to surface-disturbing activities with the potential to affect stream channel integrity; reduce riparian functioning condition; or, reduce the Watershed Condition Rating. The BLM will be available to advise operators on the exact type of information and detail needed to meet this requirement. Reclamation plans will be designed to result in rehabilitation of habitats within an accelerated time frame (such as less than three years) and will focus on active revegetation and streambank stabilization techniques as the basis for reclamation design.

A.2.3. Forestry

SOP Forest-1 Timber sale authorizations will require the proper site preparation to ensure natural regeneration of timber stands.

SOP Forest-2 Timber sales will include buffers to prevent disturbance of priority fish species habitat and sedimentation into streams. Buffer widths will be dependent on harvest method, season of harvest, equipment used, slope, vegetation, and soil type. Winter operations will be considered in order to avoid the need for road building and reduce impacts to soils, vegetation, and riparian areas.

A.2.4. Hazardous Materials and Waste Management

SOP Hazmat-1 Areas of activities will be left clean of all debris to minimize environmental contamination from solid waste.

SOP Hazmat-2 All solid wastes, including incinerated ash, will be removed by the permittee from public lands and disposed of within an Alaska Department of Environmental Conservation (ADEC) approved facility, unless otherwise specified. Solid waste combustibles may be incinerated in a contained and controlled manner, however, burn restrictions may apply during high-risk wildland fire seasons. Burial of solid waste is not authorized on public lands.

SOP Hazmat-3 Wastewater should be managed in accordance with Title 18 Alaska Administrative Code, Chapter 72, (18 AAC 72) Wastewater disposal. Wastewater can be defined as human wastes (sewage) and gray water (wastewater from a laundry, kitchen, sink, shower, bath or other domestic sources). Pit privies are authorized in accordance with 18 AAC 72.020(b)(c)(i), 72.030 and all applicable updates. If these standards cannot be met, then special authorization may be given by the AO. Gray water may not be released in any waterbody, without authorization under the Alaska Pollutant Discharge Elimination System (APDES). Gray water may be filtered and released to the surface so as not to cause erosion, and the grey water released must maintain compliance with the ADEC's guidance.

SOP Hazmat-4 All hazardous materials and petroleum, oil, and lubricants (POLs) will be stored in containers that are compatible to the material being stored. Containers will be labeled with the responsible party's name, contents of the container, the date the product was purchased, and the date the container was filled.

SOP Hazmat-5 Transportation and storage of POLs will be handled in a safe manner to avoid impacts to the environment and human health. The storage area for any POLs must be approved by the AO.

SOP Hazmat-6 POLs that are transferred to remote locations for operations are to be stored within a containment area constructed to contain 110 percent of the volume of the largest container. The containment area must be lined with an impermeable liner which is free of cracks or gaps, compatible with the contents to be stored, and sufficiently impervious to contain leaks or spills. The containers shall be covered to eliminate the collection of rainwater within the containment area throughout the storage period.

SOP Hazmat-7 All hazardous materials/toxic substances must be disposed of in accordance with EPA and ADEC regulations at the time of disposal.

SOP Hazmat-8 Transfer of POLs to equipment will be completed in a secure manner to minimize the possibility of contamination to the surrounding environment. At a minimum, POL-type absorbent pads will be placed under the transfer location to catch overflow or assist the operator in containing a spill. If refueling cannot be avoided within riparian habitat, 500 feet of fish-bearing waterbodies, or 100 feet of non-fish bearing waterbodies; the responsible party must exercise caution while refueling to ensure no release of POLs into the waterbody. Equipment that has been identified as having a fluid leak must have a drip basin placed under the leak area to ensure no release to the surrounding environment or collection of rain water.

SOP Hazmat-9 Equipment maintenance by the responsible party may be allowed if it is necessary to operate equipment as described in the authorization. Equipment maintenance that has the potential to release fluids should be completed over an impermeable liner to ensure fluid migration to the environment does not occur.

SOP Hazmat-10 A Spill Prevention, Control and Countermeasure Plan (SPCC) will be written for all sites which have the potential to store 1,320 gallons or more of POLs. SPCCs will follow the requirements in 40 CFR 112 and state regulations.

SOP Hazmat-11 All spills will be contained and cleaned up in accordance with ADEC guidance as soon as the release has been identified, unless health and safety of personnel is at risk. ADEC discharge notifications and reporting requirements are outlined in AS 46.03.755 and 18 AAC 75 Article 3. The release of POLs to any waterbody must be immediately reported to ADEC, as soon as the person has knowledge of the release. The responsible party will contact the AO within 48 hours of a spill on public lands. Notifying the EPA may be required for discharges of oil, as required by 40 CFR 112.4.

A.2.5. Mineral Materials

SOP MM-1 Use existing upland material sources that meet suitability and economic needs whenever possible. Using material from wetlands, lakes, and active or inactive floodplains will be avoided, unless no feasible upland alternative exists. Sales or permits for in-stream gravel extraction within an active channel will not be allowed in priority fish species spawning habitat.

SOP MM-2 When authorizing mineral material sale sites, avoid habitats critical to local fish or wildlife populations (such as fish spawning and overwintering, calving areas, or raptor nesting sites). Avoid key geomorphic features, such as the river cut banks and associated riparian zones; springs; active channels of small, single channel rivers;, and, wetlands.

SOP MM-3 When authorizing mineral material sale sites, avoid priority plant species and communities. If sales are authorized in vegetated areas all overburden, vegetation mats and debris will be saved and appropriately stored for use during site reclamation to facilitate vegetative recovery.

SOP MM-4 When scraping gravel in active or inactive floodplains, maintain buffers that will constrain active channels to their original locations and configurations.

A.2.6. Soils

SOP Soils-1 Save all organic material in a separate area from overburden (defined in 43 CFR 23.3 (d)) for future use.

SOP Soils-2 Stockpiled soil and overburden will be spread over mine tailings and stabilized to minimize erosion. The shape of contoured tailing and overburden should approximate the shape of surrounding terrain.

SOP Soils-3 Roadways will be ditched on the uphill side. Culverts or low water crossings will be installed at suitable intervals. Spacing of drainage devices and water bars will be appropriate for the road gradient and soil erodibility of the site.

SOP Soils-4 Design roads and trails for minimal disruption of natural drainage patterns.

SOP Soils-5 Roads and trails should avoid areas with unstable or fragile soils.

SOP Soils-6 Water bars will be placed across reclaimed roads. Spacing will be dependent on road gradient, soil erodibility, and other site-specific factors.

SOP Soils-7 Snow and ice bridges will be removed, breached, or slotted before spring break-up. Ramps and bridges will be substantially free of soil and debris.

SOP Soils-8 Overland moves and heavy equipment use:

- Whenever possible, overland moves that are a part of permitted operations will occur during winter when frost and snow cover is sufficient to minimize vegetation and soil disturbance and compaction. The AO will determine the date when sufficient frost and snow cover exists and no overland moves should occur until these conditions are met.
- Design and locate winter trails and ice roads for overland moves to minimize compaction of soils and breakage, abrasion, compaction, or displacement of vegetation.
- Clearing of drifted snow is generally allowed, to the extent that vegetative ground cover is not disturbed.
- Offsets of winter trail/ice road locations may be required to avoid using the same route or track each subsequent year.
- When access is required in snow-free months, routes that utilize naturally hardened sites will be selected to avoid trail braiding and wetlands will be avoided. The permittee will employ vehicle types and methods that minimize vegetation and soil disturbance, such as use of air or water craft, utilizing existing roads or trails, or use of low ground pressure vehicles.
- The use of heavy machinery in saturated soil conditions will be limited to low ground pressure designated machinery.

A.2.7. Special Status Species

SOP SS-1 The planning area may contain or be identified with Special Status Species or their habitats. The BLM may require actions to avoid or minimize impacts to Special Status Species, pursuant to BLM policy and Endangered Species Act consultation.

SOP SS-2 Where practical, use may be redirected to protect Special Status Species habitat; to enhance indigenous animal population; or, to otherwise maintain public land health through avoidance of sensitive habitat. If impacts to Special Status Species (populations and habitats) cannot be avoided, the applicant (or the BLM for internal actions) will develop mitigation measures to reduce impacts.

SOP SS-3 Where populations or individual sensitive status plant species are located, take measures to protect these populations or individuals through site-specific buffers or management prescriptions. Route new roads and trails away from known sensitive plant communities, with minimum 100-foot buffers; and minimize summer cross-country OHV travel where there are sensitive plants.

A.2.8. Subsistence

SOP Sub-1 For externally generated actions, the BLM may require applicants to provide information to potentially affected subsistence communities regarding the timing, siting, and scope of a proposed activity; and to consult with the potentially affected subsistence communities about ways to minimize impacts to subsistence. If these consultations occur, the applicant may be required to provide documentation of their consultation efforts to the BLM.

A.2.9. Vegetation and Non-Native Invasive Species

SOP Veg-1 All vegetation treatments and revegetation of surface disturbance will require an approved site-specific plan designed to prevent the introduction of non-native invasive plants (invasive plants), and achieve desired conditions. These plans should describe current vegetative conditions: including plant community composition, structure, cover, seral stages, soil descriptions, age class distribution if applicable, and presence of invasive plants, desired vegetative conditions (based on the ecological capability of the site), treatment methods, measures for preventing introduction and spread of invasive plants, and monitoring actions. Whenever possible, treatments will use native vegetation and seed. Non-native vegetation and seed may be used with specific approval from the AO, and in the following cases (1) where native species are not available in sufficient quantities; (2) where native species are incapable of maintaining or achieving the objectives; or, (3) where non-native species are essential to the functional integrity of the site. Seed must meet Alaska certification standards (11 AAC 34.020 Prohibited and Restricted Noxious Weeds) and any amendments to the existing seed laws or new seed legislation.

SOP Veg-2 Existing roads and trails will be utilized for access where feasible, rather than creating new roads and trails. All road or trail construction must include a plan for reclamation similar to a vegetation treatment plan in SOP Veg-1 above. It should also include best management practices for revegetation of cuts and fills and minimize off-site sediment transport impacts. Construction of road or trails in wetlands and floodplains will be avoided.

SOP Veg-3 Destruction of the vegetative mat and associated vegetation will not be be authorized, unless the AO determines that no feasible alternative exists. In those cases the AO will require that the vegetative mat and topsoils be salvaged and appropriately stored and used for reclamation. If the AO decides that vegetative mat and topsoils cannot be salvaged, other measures to protect vegetation and soils will be considered. Plans for revegetation of surface disturbances will be clearly addressed during authorization of an action.

SOP Veg-4 Design and locate permanent facilities to minimize the development footprint.

SOP NIS-1 To eliminate, minimize, or limit the spread of noxious and non-native invasive plants, only feed and mulch (hay cubes, hay pellets, or straw, for example) certified as weed-free through the Alaska Weed-Free Forage certification program (or other programs with approval of the AO) will be authorized on BLM lands. Where Alaska certified sources are not available, locally produced forage and mulch may be used with approval from the AO. If no certified weed-free or local sources are available, other products may be used with the approval of the AO.

SOP NIS-2 To eliminate, minimize, or limit the spread of noxious and non-native invasive plants, only gravel and material certified as weed-free through the Alaska Weed-Free Gravel certification program will be authorized on BLM lands. Where weed-free gravel and materials are not available other sources may be used, with the approval of the AO.

SOP NIS-3 Fire management actions, including prescribed fire operations, wildland fire suppression and fire rehabilitation efforts, will protect burned and adjacent areas from the introduction and spread of non-native invasive plants. Protection may include the use of washing stations with a containment system.

SOP NIS-4 Employ measures outlined in the most current Alaska Aquatic Nuisance Species Management Plan (ADF&G 2002a) and the most current Interim Fire Operations Guidance to Prevent Spread of Aquatic Invasive Species (USFS 2011) to reduce the introduction and spread of Aquatic Nuisance Species.

SOP NIS-5 All actions implemented or authorized by the BLM will include measures to prevent the introduction and spread of non-native invasive species, if applicable to the site.

A.2.10. Visual Resource Management

SOP VRM-1 To the extent practicable, all facilities and activities will be located away from visually sensitive areas, rivers, trails, and other transportation features; using distance to reduce the facility's visual impact along travel corridors.

SOP VRM-2 All facilities and activities will be designed to meet the visual resource management class, using proper siting and location so that natural features of vegetation and landforms provide screening from travel corridors and other key observation points, and to blend with the natural surroundings.

SOP VRM-3 The modification or disturbance of landforms and vegetative cover will be minimized. Facilities and activities will be designed to reduce unnecessary disturbance.

SOP VRM-4 Facilities and activities will be designed so their shapes, sizes, colors, and textures harmonize with the scale and character by repeating the elements of line, form, color and texture of the surrounding landscape, where possible.

SOP VRM-5 In panoramic landscapes, development will be located in the opposite direction from the primary scenic views, key observation points and located using natural or artificial screening, where feasible.

A.2.11. Water, Riparian, and Wetlands

SOP Water-1 Where instream operations are authorized, streams must be diverted using an appropriately sized bypass channel.

SOP Water-2 In mining operations and fluid mineral leasing operations, all process water and ground water seeping into an operating area must be treated appropriately (i.e., use of settling ponds) prior to re-entering the natural water system.

SOP Water-3 Settling ponds will be cleaned out and maintained at appropriate intervals to comply with state and federal water quality standards. Fine sediment captured in the settling ponds will be protected from washout and left in a stable condition at the end of each field season to prevent unnecessary or undue degradation to the environment during periods of non-operation.

SOP Water-4 Streams altered by channeling, diversion, or damming will be restored to a condition that will allow for proper functioning of the riparian zone and stream channels. Active streams will be returned to the natural water course or a new channel will be created at its lowest energy state (valley bottom) that approximates the old natural channel in shape, gradient, and meander frequency using a stable channel design.

SOP Water-5 All permitted operations will be conducted in such a manner to not block any stream or drainage system.

SOP Water-6 Structural and vegetative treatments in riparian and wetland areas will be compatible with the capability of the site, including the system's hydrologic regime, and will contribute to maintenance or restoration of proper functioning condition.

SOP Water-7 Projects requiring the withdrawal of water will be designed to maintain sufficient quantities of surface water and contributing groundwater to support fish, wildlife, and other beneficial uses.

SOP Water-8 State-designated stream crossings will be used where possible for vehicle travel. Stream crossings are online at http://www.habitat.adfg.alaska.gov/gpvehstreamxings.php, noted under the General Permits Index-Authorized Vehicle Stream Crossings

SOP Water-9 Rivers and streams will be crossed by vehicles at shallow riffles from point bar to point bar, where possible.

SOP Water-10 When a stream must be crossed, the crossing will be as close to possible to a ninety degree angle to the stream. Stream crossings will be made at stable sections in the stream channel, based on Rosgen channel type evaluations.

SOP Water-11 Disturbed stream banks will be recontoured and revegetated (or other protective measures will be taken) to prevent soil erosion into adjacent waters.

A.2.12. Wildland Fire Management

SOP FM-1 Permittees and casual users will be held financially responsible for any actions or activity that results in a wildland fire. Costs associated with wildland fires include (but are not limited to) damage to natural or cultural resources and costs associated with any suppression action taken on the fire.

SOP FM-2 The BLM will not be held responsible for protection of permittees' structures or their personal property from wildland fire. It is the responsibility of permittees and lessees to mitigate and minimize risk to their personal property and structures from wildland fire, following the conditions in their permit.

SOP FM-3 Gas-powered equipment must be equipped with manufacturer approved and functional spark arrestors.

SOP FM-4 To avoid the potential impacts to aquatic life, the BLM prohibits the use of fire retardant, except when necessary to protect human life, permanent year-round residences, national historic land-marks, structures listed as eligibile for the National Register of HIstoric Places, government facilities, other designated sites or structures, or high-value resources on adjacent lands. Water will be used instead of fire retardant where possible or appropriate. The use of fire suppressant foam is prohibited. Fisheries staff will be involved with decisions to deliver chemical retardant, additives to, or grey water discharge into surface waters.

SOP FM-5 The use of tracked or off-road vehicles in wildland fire suppression or management activities will be conducted in a manner that minimizes erosion, riparian area damage, water quality or fish habitat degradation, or contributes to stream channel sedimentation.

SOP FM-6 Off-road use of heavy equipment and other motorized vehicles requires approval of the AO.

SOP FM-7 Rehabilitate burned areas in accordance with wildland fire-specific rehabilitation plan provided by the Field Office to the suppression agency.

SOP FM-8 Firelines to mineral soil will not be built in or around riparian areas; unless they are needed to protect life, property, and/or wetland resources. Use natural features as preferred firebreaks over firelines constructed to mineral soil. When possible, use hand crews to establish firelines within (or adjacent to) riparian areas.

SOP FM-9 To the extent practicable, select the location for bases, camps, helibases, and so on to avoid riparian areas.

A.2.13. Wildlife

SOP Wild-1 Design pipelines and roads to allow the free movement of wildlife and the safe, unimpeded passage of the public while participating in traditional subsistence activities. The currently accepted design practices are: 1) Above-ground pipelines will be elevated a minimum of seven feet, measured from the ground to the bottom of the pipeline at vertical support members, to facilitate human and wildlife movement under the pipe; 2) In areas where facilities or terrain may funnel caribou movement, ramps over pipelines or buried pipelines may be required; and, 3) Where feasible, maintain a minimum distance of 500 feet between above-ground pipelines and roads.

SOP Wild-2 Prior to development of large facilities, the AO may require development of an ecological land classification map of the development area. The map will integrate geomorphology, surface form, and vegetation at a scale, level of resolution, and level of positional accuracy adequate for detailed analyses of development alternatives and facility siting options. The map will be prepared in time to plan one summer season of ground-based wildlife or vegetation surveys, if deemed necessary by the AO, before approval of exact facility location and facility construction.

SOP Wild-3 Whenever possible, operations that require vegetation removal will avoid the migratory bird nesting period of May 1 to July 15 (USFWS Advisory: Recommended Time Periods for Avoiding Vegetation Clearing in Alaska to Protect Migratory Birds. September 2007). If NEPA analysis reveals that this would unacceptably compromise project objectives or logistical feasibility, potential impacts must be identified, and mitigation applied that are appropriate to the magnitude and duration of expected effects. Assessments would focus on species of concern, priority habitats, and key risk factors. Permittees/project proponents will be reminded that it is their responsibility to comply with provisions of the Migratory Bird Treaty Act.

SOP Wild-4 Employ industry accepted best management practices to prevent raptors and other birds from colliding with or being electrocuted by utility lines, alternative energy structures, towers, and poles (APLIC 2006, http://www.aplic.org/). If possible bury utility lines in important bird areas. Where raptors are likely to nest in human-made structures (such as cell phone towers) and such use could impede operation or maintenance of the structures or jeopardize the safety of the raptors; equip the structures with either (1) devices engineered to discourage raptors from building nests, or (2) nesting platforms that will safely accommodate raptor nests without interfering with structure performance.

SOP Wild-5 Guy-wired apparatus, regardless of purpose, will be marked in accordance with the guidance provided by the USFWS Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers, dated September 14, 2000, or a more current or contemporaneous version of that guidance.

SOP Wild-6 To minimize the potential for disease transmission to wildlife, the use of domestic sheep, goats, alpacas, llamas, and other similar species will not be authorized in conjunction with BLM-authorized activities in Dall sheep habitat.

SOP Wild-7 Activities will not be authorized between May 15 and July 15 if the activity will interfere with caribou calving and postcalving activities or Dall sheep lambing (May 10 through June 1). However, ongoing mineral production activities will be allowed throughout these time periods. In these areas and time periods, aircraft associated with activities that require BLM authorization will maintain an altitude of at least 1,500 feet above ground level (except for takeoffs and landings), unless doing so would endanger human life or violate safe flying practices. These seasonal restrictions can be modified based on actual caribou or Dall sheep occupancy of the area.

SOP Wild-8 Within the Fortymile and White Mountains caribou calving and postcalving ranges (Map 84), mineral exploration activities will not be authorized from May 15 through July 15 unless the AO determines that caribou no longer occupy the specific area of the proposed operations. This seasonal restriction can be modified based on actual caribou occupancy of area.

SOP Wild-9 All reasonable precautions will be taken to avoid attracting wildlife to food and garbage. Garbage from all BLM-authorized activities will be removed and properly disposed to prevent habituation of wildlife or alteration of populations. The BLM may require food and garbage to be stored in bear-proof containers or by methods that make it unavailable to bears or other wildlife.

SOP Wild-10 From May 1 through August 31, avoid sustained human activity within one-quarter mile of trumpeter swan nests and rearing ponds. No activity will commence prior to May 15 and, if necessary, qualified personnel will conduct a preliminary site survey within the two-week period prior to the projected start date of the activity to determine trumpeter swan presence. If present, short-term activities will be delayed until after nesting trumpeter swans and cygnets have left the habitat. Exceptions may be granted by the AO, following NEPA analysis, if no feasible alternative exists.

SOPs Specific to Areas of Critical Environmental Concern

The following four SOPs apply to the Steese, Fortymile, and White Mountains ACECs and the White Mountains Wildlife Conservation Area. They are not applicable to the Salmon Fork ACEC

SOP Wild-11[1] Applicants proposing to conduct surface-disturbing activities or other intensive activities will, at the determination of the AO, be required to submit an approved plan (Caribou and Dall Sheep Impact Assessment and Mitigation Plan) describing methods to minimize impacts to caribou and Dall sheep and their habitat. This plan must describe the proposed project, the design and mitigation alternatives considered, the amount and quality of habitat to be affected, the mitigation and restoration to be applied, the residual impacts predicted, and the monitoring to be undertaken to confirm mitigation success.

SOP Wild-12[1] Permanent roads will generally not be allowed (although long-term temporary roads may be) and roads will generally not be open to the public. Roads will be of the lowest practical profile. Road use may be restricted during caribou calving, postcalving, or Dall sheep lambing. Road construction will not be permitted if other means of access is practical (such as aircraft or winter ice-road). Facilities within ACECs that require year-round access will be located in forested areas where practical. Permitted aircraft will follow a minimum flight level of 1,500 feet above ground level, except at landing and takeoff and when it would compromise safety. The AO may allow exceptions to these access requirements where impacts to caribou and Dall sheep are adequately minimized and where other resource considerations are of higher priority.

SOP Wild-13[1] To minimize habitat loss, the surface disturbance and the aerial extent of facilities will be minimized. The amount of cumulative vegetation clearing and surface disturbance will be minimized through an integrated review of planned disturbance between all land users.

SOP Wild-14[1] Reclamation and revegetation of disturbed areas will be required to meet performance standards set in site-specific reclamation plans, such as a required plant cover (percent) within a certain number of years before a performance bond is released.

Priority Raptor SOPs

Priority raptor species are peregrine falcon, gyrfalcon, bald eagle, and golden eagle. Nesting seasons are defined as: From April 15 through August 15 for bald eagles, golden eagles, and peregrine falcons; and, from March 15 through July 20 for gyrfalcons. Nesting season dates apply to SOP Wild-16 through SOP Wild-20.

[1] Applicable to the Steese, Fortymile, and White Mountains ACECs and the White Mountains Wildlife Conservation Area.

SOP Wild-15 To minimize the direct loss of priority raptor foraging habitat, all reasonable and practicable efforts will be made to locate permanent facilities as far from priority raptor nests as feasible and to minimize habitat loss to the extent feasible. Of particular concern for avoidance are ponds, lakes, streams, wetlands, and riparian habitats.

SOP Wild-16 To minimize disturbance to nesting priority raptors, aircraft authorized by the BLM are required to maintain an altitude of at least 1,500 feet above ground level when within one-half mile of priority raptor nesting sites during nesting season. This protection is not intended to restrict flights necessary to conduct wildlife surveys satisfying wildlife data collection requirements.

SOP Wild-17 To reduce disturbance to nesting priority raptors, campsites authorized by the BLM, including short- and long-term camps and agency work camps, must be located at least 500 meters from any known priority raptor nest site during the nesting season. Exceptions may be granted by the AO if no feasible alternative exists.

SOP Wild-18 Authorized human activity within 500 meters of priority raptor nest sites will be minimized during the nesting season. The cumulative number of authorized visits (defined as each day in which work is done within 500 meters of a nest site) to any nest site per nesting season, by all authorized users, must be limited to three visits per nest site. Exceptions may be granted by the AO if no other feasible alternative exists.

SOP Wild-19 To reduce disturbance impacts to priority raptors, motorized ground-vehicle use must be minimized within one mile of any known priority raptor nest during the nesting season. Such use is prohibited within one-half mile of nests during the nesting season, unless an exception is granted by the AO.

SOP Wild-20 Construction within one-half mile of known priority raptor nests is prohibited during the nesting season. No facilities that will be used or accessed during the nesting period (including the area of associated human activity by facility users) can be constructed within one-half mile of known priority raptor nesting sites. Exceptions may be granted by the AO if no feasible alternative exists.

A.3. Additional Standard Operating Procedures Considered in the Supplement

In addition to the SOPs in section A.2 above, the following new or modified SOPs were considered in the Supplement to the Draft EIS for Hardrock Mining in the White Mountains. Modifications to SOPs from the Draft RMP are highlighted in grey. These SOPs apply under Alternative D only.

A.3.1. Fish and Aquatic Species

SOP FA-6 Reclamation plans for the rehabilitation of fish habitat as required under 43 CFR 3809.420(b)(3)(ii)(E) (Performance standards in part 3809 will also be used for hardrock mineral leasing operations in the White Mountains NRA) will focus on three objectives. Typically, these requirements would be satisfied through the development of a site-specific reclamation plan and on achievement of reclamation objectives. Bond release would be based on meeting specific measurable objectives outlined in a monitoring plan (43 CFR 3809.401(b)(3)). These objectives are:

1. Provide a stable channel form that is in balance with the surrounding landform such that channel features are maintained and the stream neither aggrades nor degrades. To achieve this, it will be necessary to design a post-mining stream channel using morphological characteristics of the pre-disturbance channel and floodplain (such as bankfull and floodprone dimensions, meander patterns, design flows and velocities, riffle-to-pool ratios, substrate particle sizes, and so on); which could be derived from field surveys of the area, remotely sensed information, and/or information from adjacent watersheds that exhibit similar characteristics as the watershed proposed for mining.
2. Provide sufficient riparian vegetation or anchored rocks/logs to effectively dissipate stream energy, prevent soil erosion, stabilize streambanks, provide essential nutrient input, and maintain water quality and floodplain function.
3. Provide instream habitat complexity similar to that of pre-disturbance levels through the use of instream structures (such as vortex rock weirs, cross-vane structures, and installation of root wads).

SOP FA-7

Within Riparian Conservation Areas, the Salmon Fork ACEC, and areas open to hardrock mineral leasing in the White Mountains baseline hydrological data adequate to characterize the seasonal flow patterns and discharge will be required prior to surface-disturbing activities with the potential to affect stream channel integrity; reduce riparian functioning condition; or, reduce the Watershed Condition Rating. The BLM will be available to advise operators on the exact type of information and detail needed to meet this requirement. Reclamation plans will be designed to result in rehabilitation of habitats within an accelerated timeframe (such as less than three years) and will focus on active revegetation and streambank stabilization techniques as the basis for reclamation design.

A.3.2. Recreation

SOP R-1 No mining activity within one-half mile of Crowberry and Richards cabins.

SOP R-2 No mining activity within 200 feet of BLM-managed recreational trails.

SOP R-3 No utilization of public use cabins for purposes of mining activity.

A.3.3. Wildlife

SOP Wild-21 Post mining rehabilitation of fish and wildlife habitat will be required. Reclamation and revegetation of disturbed areas will be required to meet performance standards set in site-specific reclamation plans, such as required plant cover (percent) within a certain number of years before a performance bond is released.

A.4. Standard Operating Procedures Considered in the Proposed RMP

The following is a complete list of the SOPs that would apply under Alternative E, which is the BLM's Proposed RMP. These were revised from those in the Draft RMP/EIS based on public comment and internal review. Section A.2 lists the SOPs that would apply under Alternatives B–D.

A.4.1. Cultural and Paleontology

SOP C-1 This SOP was dropped because it restates existing laws, policy, and regulations.

SOP C-2 Mitigation measures will be considered for all actions that may potentially affect cultural resources. If the AO determines mitigation measures are necessary to protect and conserve known cultural resources, a mitigation plan will be approved by SHPO and implemented by the AO. Mitigation plans will be reviewed as part of Section 106 consultation for National Register of Historic Places eligible or listed properties. The extent and nature of recommended mitigation will be commensurate with the significance of the cultural resource involved and the anticipated extent of the damage. Costs for mitigation will be borne by the land use applicant.

SOP C-3 If damage to known significant paleontological resources cannot be avoided, the applicant (or the BLM for internal actions) will perform scientific examination of the impacted significant paleontological resources followed by mitigation approved by the AO. This may include the professional collection and analysis of significant specimens by scientists.

A.4.2. Fish and Aquatic Species

SOP FA-1 No low water crossings (fords) will be permitted in priority fish species spawning habitat, during times of active spawning and when immobile life stages of fish are present (eggs and alevins) unless it is determined that impacts would be neglible.

SOP FA-2 New, replacement, and reconstructed stream crossing structures (such as bridges and culverts) will be designed to:

- Convey flood flows consistent with the purpose and period of use of the structure (e.g. seasonal or year-round) under natural conditions consistent with BLM manual 9112;
- Preserve or improve fish passage;
- Maintain channel integrity;
- Provide slope protection e.g. riprap) on both the inlet and outlet end of culverts and on approach embankments of bridges; and,
- Incorporate adjacent reclamation (such as willow cuttings, wattles, brush layering) on the disturbed areas up and downstream of the abutments.

SOP FA-3 Application of pesticides and other toxicants will occur in a manner that does not measurably inhibit the attainment of desired conditions or adversely impacts priority aquatic species.

SOP FA-4 This SOP was dropped because is covered by the Fluid Mineral Leasing Stipulations in Table A.1.

SOP FA-5 All water intakes will be screened and designed to prevent fish intake and mortality.

SOP FA-6 Streams altered by channeling, diversion, or damming will be restored to a condition that maintains or improves aquatic and riparian habitats to pre-disturbance levels. (the objective previously described in this SOP are in section 2.6.2.3 Fish and Aquatic Species, Management Common to All Alternatives and Subunits).

SOP FA-7 Baseline geomorphic and hydrologic data will be required prior to surface-disturbing activities with the potential to affect stream channel integrity; reduce riparian functioning condition; or, reduce the Watershed Condition Rating. The BLM will be available to advise operators on the exact type of information and detail needed to meet this requirement.

A.4.3. Forestry

SOP Forest-1 Commercial timber sale authorizations will require the proper site preparation to ensure natural regeneration of timber stands.

SOP Forest-2 For commercial timber sales and personal use timber permits the requirement for a buffer will be considered to prevent disturbance of priority fish species habitat, sedimentation into streams, impairment of visual resource qualities, or to protect outstandingly remarkable values of wild and scenic rivers. Buffer widths will be determined on a case-by-case basis.

SOP Forest-3 For commercial timber sales and personal use timber permits the requirement for winter only operations will be considered in order to avoid construction of new roads and to reduce impacts to soils, vegetation, and riparian areas.

A.4.4. Hazardous Materials and Waste Management

SOP Hazmat-1 This SOP was dropped because it is covered by SOP Hazmat-2.

SOP Hazmat-2 All solid wastes, including incinerated ash, will be removed by the permittee from public lands and disposed of within an Alaska Department of Environmental Conservation (ADEC) approved facility, unless otherwise specified. Solid waste combustibles may be incinerated in a contained and controlled manner, however, burn restrictions may apply during high-risk wildland fire seasons. Burial of solid waste is not authorized on public lands.

SOP Hazmat-3 Pit privies must be at least 100 feet from any water body. The AO may require a larger separation distance in order to protect high-value resources. No septic system will be installed without AO approval. Gray water must be filtered before being released to the surface and must be discharged in a way that does not cause erosion. Gray water may not be released to any water body.

SOP Hazmat-4 All hazardous materials and petroleum, oil, and lubricants (POLs) will be stored in containers that are compatible to the material being stored. Containers will be labeled with the responsible party's name, contents of the container, the date the product was purchased, and the date the container was filled.

SOP Hazmat-5 Storage of POLs at any site will require secondary containment. The containment area must be constructed to hold at least 110 percent of the largest container, lined with an impermeable liner that is free of cracks or gaps, compatible with the contents stored, and sufficiently impervious to contain leaks, or spills. The containment area must be covered to eliminate the collection of rainwater within the containment area. The AO may also require a Spill Prevention and Contingency Plan.

SOP Hazmat-6 This SOP was combined with SOP Hazmat-5.

SOP Hazmat-7 This SOP was dropped because it restates both state and federal regulations.

SOP Hazmat-8 If refueling cannot be avoided within the riparian zone or within 100 feet of a water body, a catch basin and POL-type absorbent pads will be utilized to collect any overflow.

SOP Hazmat-9 Leaking equipment must have a drip basin placed under the leak area and the basin must be protected from the collection of rain water to ensure no release to the surrounding environment. When maintenance to equipment has the potential to release fluids, an impermeable liner must be utilized to ensure that spills are contained.

SOP Hazmat-10 This SOP was combined with SOP Hazmat-5.

SOP Hazmat-11 All spills will be contained and cleaned up upon discovery. Spills that are reportable to ADEC will also be reported to the AO in the same time frame.

A.4.5. Mineral Materials

SOP MM-1 Use existing upland material sources that meet suitability and economic needs whenever possible. Sales or permits for in-stream gravel extraction within an active channel will not be allowed in priority fish species spawning habitat.

SOP MM-2 When authorizing mineral material sale sites, avoid habitats critical to local fish or wildlife populations (such as fish spawning and overwintering, calving areas, or raptor nesting sites). Avoid key geomorphic features, such as the river cut banks and associated riparian zones; springs; active channels of small, single channel rivers; and, wetlands.

SOP MM-3 When authorizing mineral material sale sites, avoid priority plant species and communities. If sales are authorized in vegetated areas all overburden, vegetation mats and debris will be saved and appropriately stored for use during site reclamation to facilitate vegetative recovery.

SOP MM-4 When scraping gravel in active or inactive floodplains, maintain buffers that will constrain active channels to their original locations and configurations.

A.4.6. Soils

SOP Soils-1 This SOP was dropped because it restates regulations.

SOP Soils-2 Stockpiled soil and overburden will be spread over mine tailings and stabilized to minimize erosion. The shape of contoured tailing and overburden should approximate the shape of surrounding terrain.

SOP Soils-3 Roadways will be ditched on the uphill side. Culverts or low water crossings will be installed at suitable intervals. Spacing of drainage devices and water bars will be appropriate for the road gradient and soil erodibility of the site.

SOP Soils-4 Design roads and trails for minimal disruption of natural drainage patterns.

SOP Soils-5 Roads and trails should avoid areas with unstable or fragile soils.

SOP Soils-6 This SOP was dropped because it is not needed. In reclaimed roads, the road bed is removed and the road cut is reclaimed to match the surrounding terrain thus water bars are not needed.

SOP Soils-7 This SOP was dropped because it is unlikely to be feasible in the planning area due to climactic conditions and is better dealt with during the permitting process.

SOP Soils-8 Overland moves and heavy equipment use:

- Whenever possible, overland moves that are a part of permitted operations will occur during winter when frost and snow cover is sufficient to minimize vegetation and soil disturbance and compaction. The AO will determine the date when sufficient frost and snow cover exists and no overland moves should occur until these conditions are met.
- Design and locate winter trails and ice roads for overland moves to minimize compaction of soils and breakage, abrasion, compaction, or displacement of vegetation.
- Clearing of drifted snow is generally allowed, to the extent that vegetative ground cover is not disturbed.
- Offsets of winter trail/ice road locations may be required to avoid using the same route or track each subsequent year.
- When access is required in snow-free months, routes that utilize naturally hardened sites will be selected to avoid trail braiding and wetlands will be avoided. The permittee will employ vehicle types and methods that minimize vegetation and soil disturbance, such as use of air or water craft, utilizing existing roads or trails, or use of low ground pressure vehicles.
- The use of heavy machinery in saturated soil conditions will be limited to low ground pressure designated machinery.

SOP Soils-9 At sites where stockpiled soil quantities are insufficient to distribute over the entire disturbed area, specific areas in each zone should be selected, to receive organic material. Use organic material from adjacent areas if practicable. At sites where organic material is not available, stockpiles of fine inorganic material may be used in place of the organics.

SOP Soils-10 Prudent use of erosion control measures, including diversion terraces, riprap, matting, temporary sediment traps, and water bars will be employed as necessary to control soil erosion. The type and location of sediment control structure, including construction methods, will vary by site-specific characteristics.

SOP Soils-11 Areas disturbed during project operation or construction will be restored to as near pre-project conditions as practical. Wetland topsoil will be selectively handled. Mulching, erosion control measures, and fertilization may be required to achieve acceptable stabilization of surface materials. Inter-seeding, secondary seeding, or staggered seeding may be required to accomplish revegetation objectives. Follow-up seeding or corrective erosion control measures may be required on areas of surface disturbance which experience reclamation failure. Corrective erosion control measures could include, but are not limited to, broadcasting woody debris, planting viable portions of live shrubs (sprigging), and transplanting live vegetation from adjacent areas.

SOP Soils-12 The BLM recognizes that there may be more than one correct way to achieve successful reclamation of soil and water resources, and a variety of methods may be appropriate to the varying circumstances. The BLM will continue to allow applicants to use their own expertise in recommending and implementing construction and reclamation projects. These allowances still hold the applicant responsible for final reclamation standards of performance. The BLM will review the applicants reclamation plan and if needed, incorporate conditions of approval to enhance success and mitigate impacts.

SOP Soils-13 Reclamation of disturbed soils is expected to be accomplished as soon as possible after the disturbance occurs with efforts continuing until the site is stabilized.

SOP Soils-14 Reduce disturbance of soils by minimizing footprint of surface-disturbing activities, consolidating access to minimize the number of routes, and requiring prompt implementation of methods to mitigate soil erosion.

SOP Soils-15 Where practicable and feasible, avoid disturbance of the vegetative mat and permafrost soil areas.

SOP Soils-16 Natural revegetation of disturbed sites is the generally preferred method for restoration/stabilization of disturbed soils. Where erosion is problematic or rapid establishment of plant cover is desired, utilize a combination of seeding, planting, and transplanting of adult plants or vegetation mats, and/or fertilizing as necessary to mitigate soil erosion.

SOP Soils-17 When developing travel management plans, minimize impacts through appropriate restrictions on cross-country OHV use. Monitor soils for impacts that may be caused by OHVs.

SOP Soils-18 For long-term storage of soil stockpiles provide protective cover such as organic mulch, herbaceous vegetation, jute matting, or other erosion-preventative fabric.

A.4.7. Special Status Species

SOP SS-1 This SOP was dropped because it restates regulations and policy.

SOP SS-2 This SOP was dropped because it restates a decision in section 2.6.2.7 Management Common to All Subunits and Action Alternatives, Special Status Species.

SOP SS-3 This SOP was dropped because it restates a decision in section 2.6.2.7 Management Common to All Subunits and Action Alternatives, Special Status Species.

A.4.8. Subsistence

SOP Sub-1 This SOP was dropped because requirements for government-to-government consultation are spelled out in BLM and Department of the Interior policies.

A.4.9. Vegetation and Non-Native Species

SOP Veg-1 All vegetation treatments and revegetation of surface disturbance will require an approved site-specific plan designed to achieve desired conditions and prevent the introduction of non-native invasive plants (invasive plants). These plans should describe current vegetative conditions: including plant community composition, structure, cover, seral stages, soil descriptions, age class distribution if applicable, and presence of invasive plants, desired vegetative conditions (based on the ecological capability of the site), treatment methods, measures for preventing introduction and spread of invasive plants, and monitoring actions. Whenever possible, treatments will use native vegetation and seed. Non-native vegetation and seed may be used with specific approval from the AO, and in the following cases (1) where native species are not available in sufficient quantities; (2) where native species are incapable of maintaining or achieving the objectives; or, (3) where non-native species are essential to the functional integrity of the site. Seed must meet Alaska certification standards (11 AAC 34.020 Prohibited and Restricted Noxious Weeds) and any amendments to the existing seed laws or new seed legislation.

SOP Veg-2 This SOP was dropped because the intent is met by other SOPs (such as Soils-4, -5, -10, -11, -14, -16, and SOPs in Section A.4.13 Wetlands and Floodplains).

SOP Veg-3 This SOP was dropped because it is replaced with a decision in section 2.6.2.8 Management Common to All Subunits and Action Alternatives, Vegetative Communities.

SOP Veg-4 This SOP was dropped because it restates a decision in section 2.6.2.8 Management Common to All Subunits and Action Alternatives, Vegetative Communities. Additionally the intent of this SOP is achieved by SOP Soils-14.

SOP NIS-1 To eliminate, minimize, or limit the spread of noxious and non-native invasive plants, only feed and mulch (hay cubes, hay pellets, or straw, for example) certified as weed-free through the Alaska Weed-Free Forage certification program (or other programs with approval of the AO) will be authorized on BLM lands. Where Alaska certified sources are not available, locally produced forage and mulch may be used with approval from the AO. If no certified weed-free or local sources are available, other products may be used with the approval of the AO.

SOP NIS-2 To eliminate, minimize, or limit the spread of noxious and non-native invasive plants, only gravel and material certified as weed-free through the Alaska Weed-Free Gravel certification program will be authorized on BLM lands. Where weed-free gravel and materials are not available other sources may be used, with the approval of the AO.

SOP NIS-3 Fire management actions, including prescribed fire operations, wildland fire suppression and fire rehabilitation efforts, will protect burned and adjacent areas from the introduction and spread of non-native invasive plants. Protection may include the use of washing stations with a containment system.

SOP NIS-4 This SOP was dropped because it restates a decision in section 2.6.2.4.

SOP NIS-5 All actions implemented or authorized by the BLM will include measures to prevent the introduction and spread of non-native invasive species, if applicable to the site. Operators shall prevent and control invasive and non-native plant and noxious weed introduction or spread. Operators will be responsible for control and/or eradication of new infestations of non-native plants or noxious weeds and are advised to conduct a pre-disturbance site assessment of the presence of non-native plants or noxious weeds.

A.4.10. Visual Resource Management

SOPs VRM-1, -2, -3, -4, -5 were dropped because they are a restatement of policy standards for visual resource management (VRM) classes. All activities would be evaluated to determine if mitigation measures are needed to maintain VRM classifications.

A.4.11. Water, Riparian, and Wetlands

SOP Water-1 Where instream operations are authorized, streams must be diverted using an appropriately sized bypass channel that is stable and resistant to erosion.

SOP Water-2 In mining operations and fluid mineral leasing operations, all process water and ground water seeping into an operating area must be treated appropriately (i.e., use of settling ponds) prior to re-entering the natural water system.

SOP Water-3 Settling ponds will be cleaned out and maintained at appropriate intervals to comply with state and federal water quality standards. Fine sediment captured in the settling ponds will be protected from washout and left in a stable condition at the end of each field season to prevent unnecessary or undue degradation to the environment during periods of non-operation.

SOP Water-4 This SOP was dropped because this objective is achieved through SOP FA-6.

SOP Water-5 All permitted operations will be conducted in such a manner to not block any stream or drainage system, or inhibit fish passage.

SOP Water-6 Structural and vegetative treatments in riparian and wetland areas will be compatible with the capability of the site, including the system's hydrologic regime, and will contribute to maintenance or restoration of proper functioning condition.

SOP Water-7 Projects requiring the withdrawal of water will be designed to maintain sufficient quantities of surface water and contributing groundwater to support fish, wildlife, and other beneficial uses.

SOP Water-8 State-designated stream crossings will be used where possible for vehicle travel. Stream crossings can be found on the Alaska Department of Fish and Game website under the General Permits Index-Authorized Vehicle Stream Crossings

SOP Water-9 Rivers and streams will be crossed by vehicles in locations that minimize impacts to stream channels, stream banks, and riparian vegetation.

SOP Water-10 When a stream must be crossed, the crossing will be as close to possible to a ninety degree angle to the stream. Stream crossings will be made at stable sections in the stream channel, which have low sensitivities to disturbance and low streambank erosion potential.

SOP Water-11 Disturbed stream banks will be recontoured and revegetated (or other protective measures will be taken) to prevent soil erosion into adjacent waters and provide stream bank stability. Active stream bank revegetation or other stabilization techniques (e.g., ADF&G 2005) will be required for all erosion-prone areas (such as stream bank and near stream areas) and active seeding and/or fertilization will be required for sites with little to no organic content (i.e., essentially bare mineral soil).

SOP Water-12 Streams altered by channeling or diversion will be restored to a condition that will allow for proper functioning of stream channels, riparian zones, wetlands and watersheds. Active streams will be returned to their natural watercourse or a new channel will be created that approximates the old natural channel.

SOP Water-13 To the extent feasible and practicable, channeling, diversion, or damming that will alter the natural hydrological conditions will be avoided. This is not intended to preclude activities which by nature must occur within floodplain-riparian areas, such as placer mining.

SOP Water-14 Structural and vegetative treatment in riparian and wetland areas will be compatible with the capability of the site, including the system's hydrologic regime, and will contribute to maintenance or restoration of proper functioning condition.

A.4.12. Wetlands and Floodplains

The following SOPs were added to Alternative E based on public and internal comments on the Draft RMP/EIS.

SOP Wetland-1 Protect, restore, and maintain wetland-floodplain, ecosystems to achieve a healthy and proper functioning condition that assures physical and biological diversity, productivity, and sustainability.

SOP Wetland-2 Coordinate, cooperate, and consult with federal, tribal, state, and local agencies, private landowners, and stakeholder organizations in order to foster a unified, science-based adaptive management approach to wetland-floodplain management in a watershed/ecosystem context.

SOP Wetland-3 Provide a unified framework for BLM's science-based watershed approach to management of wetland-floodplain systems consistent with federal and state assessment methods, including monitoring, sampling, and reporting protocols.

SOP Wetland-4 Promote stewardship, conservation, and appreciation of wetland-floodplains through educational and outreach programs.

SOP Wetland-5 Wetland-floodplain sites vary in physical, chemical, and biological characteristics, resource conditions, and local use impacts. Therefore, the objectives and management designed for an area shall be tailored to the conditions, conflicts, capability and improvement potential, and land use considerations on a watershed-specific basis. Wetland-floodplain mitigation measures developed using an interdisciplinary approach should be achievable, specific, and measurable.

SOP Wetland-6 Management actions should permit the natural functions of streams, including flood energy dissipation, bank building, stream-channel maintenance, filtration of sediment and other contaminants, water-storage, and aquifer recharge to operate without significant alteration. To accomplish these actions or functions, it is necessary to evaluate the interrelationships between wetland-floodplain systems and the hydrologic and geomorphic processes of the watershed.

SOP Wetland-7 Structural and vegetative treatment in floodplains, riparian zones and wetland areas will be compatible with the ecological capability of the site, including the system's hydrologic regime, and will contribute to the maintenance or restoration of natural and proper functioning conditions.

SOP Wetland-8 Avoid overland heavy equipment moves through wetlands in spring and summer. Stipulations and mitigating measures are provided on a case-by-case basis to ensure wetland conservation and practical management.

SOP Wetland-9 Identify, encourage, and support research and studies needed to ensure that floodplain-wetland area management objectives can be properly defined and met. Incorporate research finding into the planning and management of floodplain-wetland ecosystems.

A.4.13. Wildland Fire Management

SOP FM-1 This SOP was deleted because it restated regulations.

SOP FM-2 The BLM will not be held responsible for protection of permittees' structures or their personal property from wildland fire. It is the responsibility of permittees and lessees to mitigate and minimize risk to their personal property and structures from wildland fire, following the conditions in their permit.

SOP FM-3 Gas-powered equipment must be equipped with manufacturer approved and functional spark arrestors.

SOP FM-4 To avoid the potential impacts to aquatic life, the application of fire chemicals including retardant will be avoided within 300 feet of waterbodies. Deviations are acceptable when life or property is threatened and fire chemicals reasonably expected to alleviate the threat. The AO may approve a deviation if potential damage to natural resources outweighs the impact to aquatic resources.

SOP FM-5 This SOP was deleted because it is covered by fire policy (Alaska Interagency Wildland Fire Management Plan 2010) and by the Wildland Fire Decision Support System process.

SOP FM-6 This SOP was deleted because it is covered by fire policy.

SOP FM-7 This SOP was deleted because it is covered by fire policy.

SOP FM-8 This SOP was deleted because it is covered by fire policy.

SOP FM-9 To the extent practicable, select the location for incident bases, camps, helibases, and so on to avoid riparian areas.

A.4.14. Wildlife

SOP Wild-1 Design pipelines and associated roads to allow the free movement of wildlife and the safe, unimpeded passage of the public while participating in traditional subsistence activities. The currently accepted design practices are: 1) Above-ground pipelines will be elevated a minimum of seven feet, measured from the ground to the bottom of the pipeline at vertical support members, to facilitate human and wildlife movement under the pipe; 2) In areas where facilities or terrain may funnel caribou movement, ramps over pipelines or buried pipelines may be required; and, 3) Where practicable, maintain a minimum distance of 500 feet between above-ground pipelines and roads.

SOP Wild-2 Prior to development of large facilities, the AO may require development of an ecological land classification map of the development area. The map will integrate geomorphology, surface form, and vegetation at a scale, level of resolution, and level of positional accuracy adequate for detailed analyses of development alternatives and facility siting options. The map will be prepared in time to plan one summer season of ground-based wildlife or vegetation surveys, if deemed necessary by the AO, before approval of facility location and construction.

SOP Wild-3 Whenever possible, operations that require vegetation removal will avoid the migratory bird nesting period of May 1 to July 15 (USFWS Advisory: Recommended Time Periods for Avoiding Vegetation Clearing in Alaska to Protect Migratory Birds. September 2007). If NEPA analysis reveals that this would unacceptably compromise project objectives or logistical feasibility, potential impacts must be identified, and mitigation applied that are appropriate to the magnitude and duration of expected effects. Assessments would focus on species of concern, priority habitats, and key risk factors. Permittees/project proponents will be reminded that it is their responsibility to comply with provisions of the Migratory Bird Treaty Act.

SOP Wild-4 Employ industry accepted best management practices to prevent raptors and other birds from colliding with or being electrocuted by utility lines, alternative energy structures, towers, and poles (APLIC 2006, http://www.aplic.org/). If possible bury utility lines in important bird areas. Where raptors are likely to nest in human-made structures (such as cell phone towers) and such use could impede operation or maintenance of the structures or jeopardize the safety of the raptors; equip the structures with either (1) devices engineered to discourage raptors from building nests, or (2) nesting platforms that will safely accommodate raptor nests without interfering with structure performance.

SOP Wild-5 Guy-wired apparatus, regardless of purpose, will be marked in accordance with the guidance provided by the USFWS Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers, dated September 14, 2000, or a more current or contemporaneous version of that guidance.

SOP Wild-6 This SOP was dropped because it restates a decision in section 2.6.2.13.

SOP Wild-7 Activities will not be authorized between May 15 and July 15 if the activity will interfere with caribou calving and postcalving activities (May 10 through June 1 for Dall sheep lambing). However, ongoing mineral production activities will be allowed throughout these time periods. In these areas and time periods, aircraft associated with activities that require BLM authorization will maintain an altitude of at least 1,500 feet above ground level (except for takeoffs and landings), unless doing so would endanger human life or violate safe flying practices. These seasonal restrictions can be modified when caribou or Dall sheep do not occupy the area.

SOP Wild-8 Within the Fortymile and White Mountains caribou calving and postcalving ranges (Map 84), mineral exploration activities will not be authorized from May 15 through July 15 unless the AO determines that caribou no longer occupy the specific area of the proposed operations. This seasonal restriction can be modified based on actual caribou occupancy of area.

SOP Wild-9 All reasonable precautions will be taken to avoid attracting wildlife to food and garbage. Garbage from all BLM-authorized activities will be removed and properly disposed to prevent habituation of wildlife or alteration of populations. The BLM may require food and garbage to be stored in bear-proof containers or by methods that make it unavailable to bears or other wildlife.

SOP Wild-10 This SOP was dropped because most known trumpeter swan habitat is closed to mining in Alternative E. Appropriate mitigation measures can be developed for other on a case-by-case basis.

SOP Wild-11 To prevent the entrapment of small animals, particularly birds, all hollow pipes or tubes that are 2 to 10" in diameter will be filled or capped prior to installation (unless fixed horizontally).

SOPs Specific to Areas of Critical Environmental Concern

SOPs Wild-11, -12, -13, and -14 were dropped because they are included in Alternative E as ACEC or wildlife conservation area management decisions. These decisions are listed in sections 2.7.2.4.3.1, 2.8.2.4.3.1, and 2.10.2.4.1.6.

Priority Raptor SOPs

Priority raptor species are peregrine falcon, gyrfalcon, bald eagle, and golden eagle. Nesting seasons are defined as: From April 15 through August 15 for bald eagles, golden eagles, and peregrine falcons; and, from March 15 through July 20 for gyrfalcons. Nesting season dates apply to SOP Wild-16 through SOP Wild-20. Exceptions to these raptor SOPs may be applied by the AO in situations where no practicable alternative exists; disturbance is adequately mitigated by site characteristics such as topography or vegetation, or by known tolerance of nesting birds to activities at the location; or where raptors establish nests near previously constructed facilities.

SOP Wild-15 To minimize the direct loss of priority raptor foraging habitat, all reasonable and practicable efforts will be made to locate permanent facilities as far from priority raptor nests as practicable and to minimize habitat loss. Of particular concern for avoidance are ponds, lakes, streams, wetlands, and riparian habitats

SOP Wild-16 To minimize disturbance to nesting priority raptors, aircraft authorized by the BLM are required to maintain an altitude of at least 1,500 feet above ground level when within one-half mile of priority raptor nesting sites during nesting season. This protection is not intended to restrict flights necessary to conduct wildlife surveys satisfying wildlife data collection requirements.

SOP Wild-17 To reduce disturbance to nesting priority raptors, campsites authorized by the BLM, including short- and long-term camps and agency work camps, must be located at least 500 meters from any known priority raptor nest site during the nesting season.

SOP Wild-18 Authorized human activity within 500 meters of priority raptor nest sites will be minimized during the nesting season. The cumulative number of authorized visits (defined as each day in which work is done within 500 meters of a nest site) to any nest site per nesting season, by all authorized users, must be limited to three visits per nest site.

SOP Wild-19 To reduce disturbance impacts to priority raptors, motorized ground-vehicle use must be minimized within one mile of any known priority raptor nest during the nesting season. Such use is prohibited within one-half mile of nests during the nesting season.

SOP Wild-20 Construction within one-half mile of known priority raptor nests is prohibited during the nesting season. No facilities that will be used or accessed during the nesting period (including the area of associated human activity by facility users) can be constructed within one-half mile of known priority raptor nesting sites.

A.5. Fluid Mineral Leasing Stipulations

The following leasing stipulations would be applied to any lease sales in the Eastern Interior Planning Area and were considered in both the Draft RMP/EIS and the Proposed RMP/Final EIS. These would apply under all action alternatives (B-E).

Table A.1. Fluid Mineral Leasing Stipulations

Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
Goal: Prevent avoidable damage from proposed land uses to habitats supporting Special Status Species animals and plants, and their habitats.		
Stipulation 1: The lease area may contain or be identified with Special Status Species or their habitats. BLM may require applicants to avoid or minimize impacts to these species pursuant to BLM policy and Endangered Species Act consultation.	Areas open to fluid mineral leasing	**Exception:** None **Modification:** None **Waiver:** None
Goal: When authorizing fluid leasable minerals actions ensure that goals to protect other resource values in the planning area are met to the extent possible.		
Stipulation 2: Upon abandonment or expiration of the lease, all fluid mineral-related facilities will be removed and sites rehabilitated as near to the original condition as practicable, subject to the review of the AO.	Areas open to fluid mineral leasing	**Exception:** The AO determines that it is in the best interest of the public to retain some or all facilities. **Modification:** None **Waiver:** None
Stipulation 3: Exploratory drilling will be limited to temporary facilities such as ice pads, ice roads, ice airstrips, and temporary platforms.	Areas open to fluid mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that construction of permanent facilities such as gravel airstrips, storage pads, and connecting roads are environmentally preferable or that exploring from temporary facilities is not practical or economically feasible. **Modification:** None **Waiver:** None
Goal: Maintain and protect aquatic habitat to support populations of well-distributed native fish populations.		
Stipulation 4: Drilling is prohibited in fish-bearing lake and rivers and streams within the active floodplain.	Fish bearing rivers, streams, and lakes	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative. **Modification:** None **Waiver:** None
Goal: Minimize impacts to wildlife species from BLM-authorized activities.		

Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
Stipulation 5: No exploration activities from May 10 through June 1 in Dall sheep habitats and from May 15 through July 15 in caribou calving postcalving habitat. Construction of production facilities and production activities may occur (no work over rigs).	Identified caribou calving/postcalving and Dall sheep habitats	**Exception:** The AO may grant an exception if the lessee demonstrates that calving caribou or Dall sheep are not currently using the area. **Modification:** Season may be shortened or extended based on actual occupancy of the area. **Waiver:** This stipulation may be waived if caribou migratory patterns change and the areas are no longer used for calving.
Stipulation 6: No exploration or development activities within 500 meters of active priority raptor nests from April 15 through August 15 (only March 15 through July 20 for gyrfalcon nests).	Areas open to fluid mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative. **Modification:** Season may be adjusted based on actual nest occupancy. **Waiver:** None
Stipulation 7: No motorized ground-vehicle use or facility construction within a half mile of any known priority raptor nests from April 15 through August 15 (only March 15 through July 20 for gyrfalcon nests).	Areas open to fluid mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative. **Modification:** Season may be adjusted based on actual nest occupancy. **Waiver:** None

A.6. Hardrock Mineral Leasing Stipulations

The following leasing stipulations were considered in the Supplement for Hardrock Mineral Leasing in the White Mountains and apply to Alternative D only.

Table A.2. Hardrock Mineral Leasing Stipulations

Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
Goal: Prevent avoidable damage from proposed land uses to habitats supporting Special Status Species animals and plants, and their habitats.		
Stipulation 1: The lease area may contain or be identified with Special Status Species or their habitats. The BLM may require applicants to conduct inventories for Special Status Species and to avoid or minimize impacts to these species pursuant to BLM policy and Endangered Species Act consultation.	Areas open to hardrock mineral leasing	**Exception:** None **Modification:** None **Waiver:** None
Goal: Ensure that goals to protect other resource values in the planning area are met to the extent possible when authorizing hardrock mineral leasing activities.		

Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
Stipulation 2: Upon abandonment or expiration of the lease, all hardrock mineral-related facilities will be removed and sites rehabilitated as near to the original condition as practicable, subject to the review of the AO.	Areas open to hardrock mineral leasing	**Exception:** The AO determines that it is in the best interest of the public to retain some or all facilities. **Modification:** None **Waiver:** None
Goal: Minimize impacts to wildlife species from BLM-authorized activities.		
Stipulation 5: No exploration activities from May 10 through June 1 in Dall sheep habitats and from May 15 through July 15 in caribou calving/postcalving habitat. Construction of production facilities and production activities may occur.	Identified caribou calving/ postcalving and Dall sheep habitats	**Exception:** The AO may grant an exception if the lessee demonstrates that calving caribou or Dall sheep are not currently using the area. **Modification:** Season may be shortened or extended based on actual occupancy of the area. **Waiver:** This stipulation may be waived if caribou migratory patterns change and the areas are no longer used for calving.
Stipulation 6: No exploration or development activities within 500 meters of active priority raptor nests from April 15 through August 15 (only March 15 through July 20 for gyrfalcon nests).	Areas open to hardrock mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative and after consultation with the U.S. Fish and Wildlife Service. **Modification:** Season may be adjusted based on actual nest occupancy. **Waiver:** None
Stipulation 7: No motorized ground-vehicle use or facility construction within a half mile of any known priority raptor nests from April 15 through August 15 (only March 15 through July 20 for gyrfalcon nests).	Areas open to hardrock mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative. **Modification:** Season may be adjusted based on actual nest occupancy. **Waiver:** None

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Appendix B

Travel Management Planning

Appendix B. Travel Management Planning

B.1. White Mountains

In the Eastern Interior Draft RMP/EIS the BLM considered development of a comprehensive travel management plan for the White Mountains NRA. Based on both public comments and internal concerns, the decision in the Proposed RMP (Alternative E) is to defer the Travel Management Plan for the White Mountains NRA to an activity level plan. Interim travel management is described in section 2.10.2.2.2.6 of this document.

Travel management is the process of planning for, and managing access and travel systems on, public lands. Comprehensive travel management planning should address all resource use aspects, such as recreational, traditional, casual, commercial, and educational, and accompanying modes and conditions of travel on public lands, not just motorized or off-highway vehicle activities (BLM Land Use Planning Handbook 1601-1, Appendix C). This includes travel needs for all resource management programs administered by the BLM, including but not limited to the mineral industry and recreation.

In areas where the identification of a comprehensive travel management network would be deferred to a Travel Management Plan, interim management would be applied. Once the RODs are signed, additional data needed to identify the travel management network would be collected and a Travel Management Plan developed. The Travel Management Plan would consider multi-modal travel including travel by motorized, non-motorized, and mechanized means. The Travel Management Plan may result in further limitations on OHV use than implemented during interim management, but would be consistent with the OHV Area Designations approved in the RODs. In Limited area designations, limitations imposed by travel management planning may include: vehicle weight, vehicle width, season of use, existing trails, designated trails, and game retrieval options. Travel Management Plans would be developed using a public process, allowing for additional public and agency input. Additional NEPA analysis would be completed at that time.

B.2. Upper Black River Travel Management Plan

Introduction

Located approximately 180 miles northeast of Fairbanks and encompassing 2.6 million acres of BLM managed lands, the Upper Black River Subunit is undeveloped and very remote. The lands have had very limited intrusion due to the remoteness and lack of access. There are no roads, although there are likely a few winter trails, especially near the village of Circle. ANCSA 17(b) Easements are indicated around Circle and in the south east portion of the subunit but they have not been inventoried. Remote cabins along various rivers are generally used as season dwellings for subsistence fishing camps. There are a few Native allotments located primarily along rivers. Other facilities found in the southern portion of the subunit include three unimproved airstrips on private lands and brushed lines that remain from past oil and gas exploration. The limited evidence of human use is substantially unnoticeable and the area has been affected primarily from the forces of nature and has retained its primeval character.

Use of the lands in the Upper Black River is primarily for subsistence purposes. Hunting, fishing, trapping and gathering of edible plants and berries for the adjacent villages of Fort Yukon, Chalkyitsik, and to some degree the village of Circle. Most use occurs in in the fall and winter months. Access is by river, airplane or snowmobile. Some OHV use occurs and the OHVs are typically brought in by boat access which limits the size and weight of the OHVs. Aircraft are generally unrestricted in the Upper Black River Subunit and use would generally occur on gravel bars, ridge tops and winter snows.

Scoping and Public Participation

Alternative development for the Upper Black River travel management decisions were conducted as part the Easter Interior Resource Management Plan process. The RMP planning process included scoping meetings in Fairbanks, Anchorage, Central, Fort Yukon and Chalkyitsik. Comments received indicated a concern about continued access for subsistence resources.

Travel Management Decisions

The Off Highway Vehicle Area Designation for the Upper Black River Subunit per 43 CFR 8342.1 criteria is LIMITED.

No route designations were made for the Upper Black River Subunit due to the remote nature of the subunit, lack of connective trails and lack of access. Primary travel is for subsistence purposes. The typography, permafrost, soil types and limited access are best served with dispersed cross country travel. Limitations for weight and width would reduce potential for impacts to soil, water, vegetation, fish, and wildlife throughout the subunit in the event that OHV use increased over the life of the plan.

All forms of non-motorized use would be allowed.

Cross-country winter use (October 15 through April 30) of snowmobiles 50 inches or less in width, and weighing 1,000 pounds curb weight and less would be allowed throughout the entire subunit.

Cross-country summer use (May 1 through October 14) of vehicles up to 64 inches or less in width and weighing 1,500 pounds curb weight and less would be allowed throughout the entire subunit.

Aircraft use would be unrestricted, with the following provisions: Minimal clearing of rocks, downed logs, and brush would be allowed; construction or formal improvement of landing areas would occur by permit only; and, use of gravel bars and winter snow areas would be allowed, subject to reasonable provisions to protect resource values.

Use of motorized boats would be unrestricted.

A permit or approved Plan of Operations would be required for all other vehicle use.

New restrictions could be developed for the purposes of site protection, visitor safety, and/or maintaining an unconfined and primitive type of recreation consistent with the existing wilderness characteristics.

Sign Plan

Given the geographic location of the subunit, lack of foreseeable use beyond subsistence and lack of designated routes, no formal sign plan will be developed for the Upper Black River Subunit.

Education Plan

Upon completion, supplementary rules pertaining to weight and width limitations will be posted on the BLM's website, at the Fairbanks District Office and mailed to affected villages, the Gwichyaa Zhee Gwich'in Tribal Government (formerly Native Village of Fort Yukon), and Chalkyitsik Village Tribal Government.

Rehabilitation

There are no designated travel networks in the Upper Black River Subunit. All existing user created trails will be considered for use. As such, no rehabilitation plan for closed trails is needed.

Maps

See Map 58

Roadside and Dispersed Camping Considerations

There are no roads in the Upper Black River Subunit and a plan for roadside camping considerations in not needed. Dispersed camping would occur in the subunit and is allowable with no restrictions. The area is not designated as Special Recreation Management Area. Recreation management in the Upper Black River Subunit is limited to custodial actions only.

Monitoring, Evaluation and Enforcement

Monitoring will occur with overflights during high use periods such as hunting. Observations will include type of mechanized travel and proliferation of routes intensities. Enforcement actions will be issued for use of vehicles over the weight and width limitations.

The area may see an increase in hunt guide activities. These activities would utilize aircraft and require a Special Recreation Permit and subject to NEPA analysis. These activities will have stipulations to mitigate any impacts.

Temporary Closures and Restrictions

Where OHV activities are causing considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness sustainability, other authorized uses, or other resources, temporary closures can be implemented under the authority of 43 CFR 8341.2 and 8364.1 The purpose of a temporary closure and restriction are to protect public health and safety, or prevent undue or unnecessary resource degradation due to unforeseen circumstances and will not be used in lieu of permanent closures.

ANILCA provides specific guidance on access for the use of snowmobiles, motorboats and other means of surface transportation traditionally used for subsistence purposes by local residents on all federal public lands (Section 811). See ANILCA Section 102 (3) for the definition of "public lands". ANILCA also provides specific guidance on the use of snowmobiles, motor boats, airplanes and non-motorized surface transportation methods for traditional activities on conservation system units, national recreation areas, and national conservation areas (Section 1110).

Pursuant to ANILCA Sections 811 and 1110, such uses are subject to reasonable regulation. The NPS and USFWS have developed regulations to implement Section 811 of ANILCA. While the BLM has not developed similar regulations, a process similar to those promulgated by NPS and USFWS will be followed.

The BLM will ensure that rural residents engaged in subsistence uses shall have reasonable access to subsistence resources (ANILCA Section 811(a)) and will implement restrictions and closures to the use of snowmobiles, motorboats, and other means of surface transportation traditionally employed for subsistence purposes by local rural residents (ANILCA Section 811(b)) only if the Authorized Officer determines that such use is causing or is likely to cause an adverse impact on public health and safety, resource protection, protection of historic or scientific values, subsistence uses, conservation of endangered or threatened species, or other purposes, values, and uses for which the lands are being managed under FLPMA or designated by ANILCA (e.g. Wild and Scenic River, National Recreation Area, National Conservation Area, if applicable).

The BLM will follow the regulations implementing Section 1110 of ANILCA, as found in 43 CFR Part 36. The BLM will implement restrictions and closures to use of snowmobiles, motorboats, aircraft, and non-motorized surface transportation methods (e.g. domestic dogs, horses, and other pack or saddle animals, etc.) for traditional activities only if the Authorized Officer makes a finding, pursuant to 43 CFR 36.11(h), that such use would be detrimental to the resource values of the area.

Supplementary Rules

Decisions in the Eastern Interior RMP for travel management in the Upper Black Subunit will be listed as “Proposed” Supplemental Rules. The BLM will undertake the following supplementary rule making process:

- Publish and provide notice of proposed Supplemental Rules in the *Federal Register* and other formats and locations reasonably calculated to inform residents in the affected vicinity.
- Allow a minimum of 60-days for the public comment period on the proposed Supplemental Rules.
- Hold public hearings in the affected vicinity and other locations as deemed appropriate by the BLM.
- Respond to comments and publish the final Supplemental Rules in the *Federal Register*.
- Make the final Supplemental Rules known by the following methods (at a minimum):
- Supplemental Rules and maps with relevant information will be available for public inspection at the BLM office and at other places convenient to the public, and locations and formats reasonably calculated to inform residents in the affected vicinity.
- Signs will be posted at appropriate sites.
- BLM brochures and websites will list Supplemental Rules and show relevant maps.

The process outlined in 43 CFR36 and the Supplemental Rules process will be followed to address any travel management plan decisions that are covered by sections 811 and 1110 of ANILCA.

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Appendix C

Evaluation of ACEC Nominations

Appendix C. Evaluation of ACEC Nominations

C.1. Introduction

An area of Critical Environmental Concern (ACEC) is an area where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources; or other natural systems or processes; or to protect human life and safety from natural hazards (43 CFR 1601.0-5; BLM Manual 1613 ACECs). The identification of a potential ACEC will not, of itself, change or prevent change of the management or use of public lands. ACECs must meet the relevance and importance criteria in 43 CFR 1610.7-2(a) and must require special management (43 CFR 1601.0-5(a)) to protect:

- the area and prevent irreparable damage to resources or natural systems
- human life; and, promote safety in areas where natural hazards exist.

The Federal Land Policy and Management Act (FLPMA) requires that priority be given to the designation and protection of ACECs. ACECs are identified, evaluated, and designated through the land use planning process. An ACEC designation is the principal BLM designation for public lands where special management is required to protect important natural, historic, cultural, and scenic resources, or to identify natural hazards.

The regulation in 43 CFR 1610.7-2 outlines the process for designation of ACECs. The inventory data will be analyzed to determine whether there are areas containing resources, values, systems or processes, or hazards eligible for further consideration for designation as an ACEC. In order to be a potential ACEC, both of the following criteria must be met:

1. Relevance—There must be a significant historic, cultural, or scenic value; a fish or wildlife resource or other natural system or process; or natural hazard present.
2. Importance—The above-described value, resource, system, process, or hazard must have substantial significance and value. This generally requires qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern. A natural hazard may be important if it is a significant threat to human life or property.

An area meets the relevance criterion if it contains one or more of the following:

- A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archaeological resources and religious or cultural resources important to Native Americans).
- A fish or wildlife resource (including but not limited to habitat for endangered, sensitive, or threatened species, or habitat essential for maintaining species diversity).
- A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features).
- Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of the natural process.

The value, resource, system, process, or hazard identified under the relevance criterion must have substantial significance and values in order to meet the “importance” criteria. This generally means that the value, resource, system, process, or hazard is characterized by one or more of the following:

- Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.
- Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
- Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.
- Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare.
- Poses a significant threat to human life and safety or to property.

To be designated as an ACEC, an area must require special management attention to protect the important and relevant resources (BLM Manual 1613). “Special management attention” refers to management prescriptions developed during preparation of an RMP expressly to protect the important and relevant values of an area from the potential effects of actions permitted by the RMP, including proposed actions deemed to be in conformance with the terms, conditions, and decisions of the RMP. There are management measures which would not be necessary and prescribed if the critical and important features were not present. A management prescription is considered to be special if it is unique to the area and includes terms and conditions specifically to protect the important and relevant value(s) in that area. For example, a seasonal use stipulation on permits or other use authorizations may be prescribed specifically to protect an ACEC value. Management prescriptions providing special management attention will include more detail than prescriptions for other areas and should establish priority for implementation.

C.2. Nominations

External Nominations

During the public scoping period for the Eastern Interior RMP, the BLM received one ACEC nomination from the public for the Black River watershed (Map 59). In addition, the BLM received recommendations that the boundaries of three existing Research Natural Areas (RNAs) be reviewed to determine if the designated RNAs are of sufficient size to maintain the values for which they were designated. Since RNAs are a type of ACEC, these recommendations are handled as ACEC nominations.

During public review of the Draft RMP/EIS the Mosquito Flats area was nominated as an ACEC. The BLM evaluated the area and determined it met the relevance and importance criteria and should be considered as a potential ACEC. On January 2, 2015, BLM published a notice in the *Federal Register* beginning a 60-day public review of the Mosquito Flats ACEC. The public comment period closed on March 3, 2015.

The areas reviewed for ACEC status in this document include:

1. Upper Black River watershed
2. Big Windy Hot Springs RNA expansion
3. Mount Prindle RNA expansion
4. Limestone Jags RNA expansion
5. Mosquito Flats

Internal Nominations

The BLM may internally nominate areas for ACEC designation. The following areas were nominated internally and reviewed for ACEC status.

- Caribou calving/postcalving habitat and Dall sheep habitat in the Fortymile Subunit;
- Caribou calving/postcalving habitat and Dall sheep habitat in the Steese National Conservation Area; and
- Caribou calving/postcalving habitat and Dall sheep habitat in the White Mountains NRA.

C.3. Evaluations of Nominated Areas

Potential ACECs must meet the criteria of relevance and importance, as established in 43 CFR 1610.7-2. The following tables outline the evaluations for each nominated area.

Big Windy Hot Springs Existing Research Natural Area and Proposed Expansion (Map 59))			
Big Windy Hot Springs RNA is 160 acres. Scoping comments recommended that the BLM reevaluate the area to ensure that it was an adequate size to protect the integrity of hot springs systems. The rationale provided was that it is small and susceptible to disturbances and that a much larger area (12,700 acres) was originally considered for designation in the Steese Proposed RMP/Final EIS (BLM 1984).			
Area Evaluated: The area identified in Alternatives B and C of the Steese National Conservation Area Proposed RMP/Final EIS (BLM 1984).			
General Location	**General Description**	**Acreage**	**Values Considered**
Steese National Conservation Area, South Unit, south of Birch Creek. FM, T. 4-5N., R. 16E.	undisturbed, medium-grade hot geothermal seeps and pools	12,700	cultural, wildlife, fish, natural system, scenic
Does the proposed ACEC contain one or more relevant values?			
Relevant Values	**Yes/No**	**Rationale for Determination**	
1. A significant historic or cultural value	No	No known historic or cultural sites.	
2. A Significant scenic value	Yes	Scenic value is high with the scenic quality (Class A rating) of the area having high values in natural landscape characteristics of landform, vegetation, water, color, influence of adjacent scenery, scarcity and no impacts from cultural modifications.	
3. A fish or wildlife resource	Yes	Dall Sheep habitat, ungulate mineral licks, and escape terrain which allows use; Fortymile caribou herd year-round habitat.	
4. A natural process or system	Yes	A natural, undisturbed hot springs system	
5. Natural hazards	No	No known natural hazards	
Does the Proposed ACEC contain one or more of the important values?			
Important Values	Yes/No	Rationale for Determination	
More than locally significant	Yes	Natural systems: All other hot springs in central Alaska are either developed or have been modified in a way that has substantially disturbed natural geologic features and vegetation. Big Windy Hot Springs is undisturbed. The hot springs area supports several disjunct populations of plant and animal taxa. Wildlife: Dall sheep are very limited in distribution in Interior Alaska, and the Yukon Tanana Uplands in particular. The hot springs and adjacent area is heavily used by Dall sheep. Mineral licks are important habitat for Dall sheep. Scenic: This area is unique in landform (narrow cliff system), vegetation (unique plants), water (fast water in a boulder field and canyon) and color (vivid colors from vegetation against rock face and water) from the surrounding landscape.	

Big Windy Hot Springs Existing Research Natural Area and Proposed Expansion (Map 59))		
Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	Yes	Natural systems: Only remaining undisturbed hot springs in central Alaska. Travertine structures at the hot springs are fragile. Unique habitats created are very limited in area. Wildlife: Mineral licks are rare habitats. Sheep are vulnerable to predation and sensitive to disturbance in area due to little rugged escape habitat. Scenic: This area was identified as having Outstandingly Remarkable Scenic Values for Big Windy Creek under the Wild and Scenic Rivers Act.
Has been recognized as warranting protection	Yes	Natural systems: The hot springs system is designated as an RNA. Wildlife: Mineral licks are rare and important habitat for Dall sheep and warrant protection. Scenic: The scenery is exemplary and has high value.
Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare	No	None identified
Significant threat to human life/safety or property	No	None identified

Summary of Important Values: Wildlife, natural system and scenic.

Does the area require special management to protect important and relevant resources?

Wildlife: Yes. See Steese ACEC nomination.

Natural System: Yes. Special management is required to protect the natural hot spring system.

Scenic: Yes. Special management is required to protect the scenic quality of the natural hot spring system.

Findings: The existing RNA meets the relevance and importance criteria for natural systems and scenic. The proposed expansion area meets the relevance and importance criteria for wildlife resource. The current RNA boundary will be retained. The proposed expansion area is included in the Steese ACEC nomination, described in this Appendix.

Rationale:	Cultural: There has not been a cultural resources survey within the Big Windy Hot Springs RNA, or within the proposed expanded boundaries. There are no known cultural sites. Protections afforded by existing federal legislation (e.g., National Historic Preservation Act 1966; Archaeological Resources Protection Act 1979) are adequate to protect cultural resources that may be found in the nominated area.
Rationale:	Fish: Big Windy Creek within the existing RNA is a high gradient, riffle-rapid stream with poor pool development and rubble-boulder substrate. Fish habitat is considered marginal and appears to offer summer feeding habitat for a small number of grayling. Winter fishery surveys have not been performed but with poor pool habitat, winter use would likely be marginal. Expanding the boundary of the RNA would not benefit fishery resources.
Rationale:	Wildlife: The proposed expansion has merit for protection of Dall sheep habitat. Protection of only the Big Windy Hot Springs site will not ensure continued use by Dall sheep. To use the Hot Springs mineral lick, sheep traverse a large area with minimal escape terrain. While in this area of minimal escape terrain, sheep are much more susceptible to disturbance and the consequences of disturbance are large (energy expended and predation risk) due to the distance to quality escape terrain. In order to maintain the ability of sheep to use this area, disturbance along the route to the lick may need to be limited. In addition, the ridge between Puzzle Gulch contains year-round habitat for the Fortymile caribou herd. Field surveys in the area indicate the area may also be valuable habitat for grizzly bear, wolf, moose, and gyrfalcon.

Big Windy Hot Springs Existing Research Natural Area and Proposed Expansion (Map 59))	
Rationale:	Although the expanded area meets the relevance and importance criteria for wildlife, the planning team did not recommend expansion of the RNA to protect wildlife resources. The expanded area is included in the larger Steese ACEC nomination which also includes additional areas of delineated Dall sheep habitat and Fortymile caribou habitat. There is no need to expand the RNA boundary for the purposes of protecting the natural system. The existing management, RNA and national conservation area designations, and additional protection afforded by its remote location are sufficient to protect the natural hot springs system. The system remains intact and functioning 23 years after its initial designation as an RNA.
Rationale:	Scenic: There is no need to expand the RNA boundary for the purposes of protecting the scenic value. The existing management, RNA and national conservation area designations, and additional protection afforded by its remote location are sufficient to protect the scenic values of the natural hot springs system.

Limestone Jags Existing RNA and Proposed Expansion (Map 59))

Limestone Jags RNA is 5,170 acres. Scoping comments recommended that the BLM reevaluate the area to ensure that it is an adequate size. The rationale provided by scoping comments was that RNAs need to be an adequate size to protect the integrity of the system. During development of the White Mountains RMP in the 1980s, larger areas than ultimately designated were proposed for RNAs. The success of management related to the size of these areas must be reviewed to determine if the originally proposed larger area is necessary. The spine of the White Mountains, an area of 180,000 acres that includes the Limestone Jags RNA, was nominated for inclusion in the National Natural Landmarks Program (BLM 1984).

Area Evaluated:

General Location	**General Description**	**Acreage**	**Values Considered**
White Mountains NRA	System of caves, underground streams, natural bridges or arches, and emergent cold springs. Seasonal habitat for Dall sheep and caribou. Proposed expansion includes variety of habitats.	180,000	cultural, fish, wildlife, scenic

Does the proposed ACEC contain one or more relevant values?

Relevant Values	Yes/No	Rationale for Determination
1. A significant historic or cultural value	No	No known historic or cultural sites.
2. A significant scenic value	Yes	Scenic value is high with the scenic quality (Class A rating) of the area having high values in natural landscape characteristics of landform, vegetation, water, color, influence of adjacent scenery, scarcity and no impacts from cultural modifications.
3. A fish or wildlife resource	Yes	Dall Sheep habitat; calving, postcalving, and insect avoidance habitat for caribou
4. A natural process or system	Yes	System of caves, underground streams, natural bridges or arches, and emergent cold springs.
5. Natural hazards	No	No known natural hazards

Does the Proposed ACEC contain one or more of the important values?

Important Values	Yes/No	Rationale for Determination
More than locally significant	Yes	Natural systems: The high-latitude limestone mountains in the area are unusual in the region and create unique karst features and plant and animal habitats, including rare plant species. Wildlife: Year-round Dall sheep habitat, much of which is below elevational treeline. The area is calving, postcalving, and insect avoidance habitat for the White Mountains caribou herd and, historical habitat for the Fortymile caribou herd. Scenic: This area is unique in landform (limestone cave, bridges, pinnacles and cliff system), vegetation (unique plant communities) and color (vivid colors from vegetation against rock face and water) from the surrounding landscape.

Limestone Jags Existing RNA and Proposed Expansion (Map 59))		
Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	Yes	Natural systems: The current RNA is managed to preserve several exemplary "type needs" as part of a nationwide system of RNAs, including geologic features (most related to limestone), animal species (Dall sheep, Hoary marmot, peregrine falcon) and a variety of plant communities. Wildlife: Dall sheep habitat and caribou calving and postcalving and insect avoidance habitats are considered sensitive habitat. Scenic: This area was identified as having Outstandingly Remarkable Scenic Values for Fossil Creek under the Wild and Scenic Rivers Act.
Has been recognized as warranting protection	Yes	Natural systems: The current RNA has been determined to warrant protection of existing values for research and monitoring.
Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare	No	None identified
Significant threat to human life/safety or property	No	None identified
Summary of Important Values: Wildlife, natural systems and scenic.		
Does the area require special management to protect important and relevant resources?		
Wildlife: Yes. See White Mountains ACEC nomination. Natural System: Yes. Special management is required to protect the RNA for future research. Scenic: Yes. Special management is required to protect the scenic quality of the limestone karst system.		
Findings: The existing RNA meets the relevance and importance criteria for wildlife, natural systems and scenic. The proposed expansion area meets the relevance and importance criteria for wildlife resource. The current RNA boundary will be retained. The proposed expansion area was instead included in a larger area nominated as an ACEC and is evaluated under the White Mountains ACEC nomination.		
Rationale:	Cultural: Between 2002 and 2005, the BLM surveyed inside the current boundaries of the Limestone Jags RNA for cultural and paleontological resources, specifically focusing on the area's caves and rockshelters. Approximately 3,350 acres of land were surveyed, including 90 caves and rockshelters. No archaeological or other cultural sites were found; one paleontological site was found. There have been no other known cultural resources surveys within the boundaries of the existing Limestone Jags RNA, nor within the proposed expanded boundaries. As such, there are no known cultural sites within these areas. Therefore, specifically for cultural resources concerns, there is no reason to expand the boundary of the RNA to protect the integrity of the system or to enhance management.	
Rationale:	Fish: Fossil Creek, the most significant fish bearing stream in the RNA, contains low fishery resource values. Therefore, fish was not identified as a relevant value.	

Limestone Jags Existing RNA and Proposed Expansion (Map 59))	
Rationale:	Wildlife: The proposed expansion has merit for protection of Dall sheep and caribou calving/postcalving habitat. Protection of only the existing RNA will not ensure continued use of the larger area by Dall sheep and caribou. Although the expanded area meets the relevance and importance criteria for wildlife, the planning team did not recommend expanding the RNA to protect wildlife resources. The expanded area is however included in the larger White Mountains ACEC nomination that includes more significant portions of Dall sheep habitat and caribou habitat. See the White Mountains ACEC nomination.
Rationale:	Natural System: The existing RNA is thought to adequately protect geologic and plant community Type Needs for the purposes of a RNA.
Rationale:	Scenic: The proposed expansion has merit for protection of scenic values of Fossil Creek and the White Mountains Spine area which is unique in landform (limestone cave, bridges, pinnacles and cliff system), vegetation (unique plant communities) and color (vivid colors from vegetation against rock face and water). Although the expanded area meets the relevance and importance criteria for scenic, the planning team did not recommend expanding the RNA to protect wildlife resources.

Mount Prindle Existing Research Natural Area and Proposed Expansion (Map 59))

Mount Prindle RNA is 5,950 acres. Scoping comments recommended that the BLM reevaluate the area to ensure that it is of adequate size. The rationale provided was that RNA needs to be an adequate size to protect the integrity of the system. During development of the 1980s management plans, larger areas than ultimately designated, were proposed for RNAs. The success of management related to the size of these areas should be reviewed to determine if the originally proposed larger area is necessary. Mount Prindle and a considerably larger area (47,000 acres) was nominated and reviewed for inclusion in the National Natural Landmarks Program (NNLP) in the late 1970s (Young and Walters 1982). This area still retains the values for which it was reviewed and the RNA boundary should be expanded to ensure proper protections for the values of the area.

Area Evaluated:

General Location	**General Description**	**Acreage**	**Values Considered**
White Mountains NRA and Steese National Conservation Area	Mount Prindle and surrounding area.	47,000	cultural, wildlife, fish, scenic

Does the proposed ACEC contain one or more relevant values?

Relevant Values	Yes/No	Rationale for Determination
1. A significant historic or cultural value	No	No known cultural or archaeological sites.
2. A significant scenic value	Yes	Scenic value is high with the scenic quality (Class A rating) of the area having high values in natural landscape characteristics of landform, vegetation, water, color, influence of adjacent scenery, scarcity and little or no impacts from cultural modifications.
2. A fish or wildlife resource	Yes	Dall sheep habitat and mineral lick; current White Mountains and historical Fortymile caribou herd calving habitat
3. A natural process or system	Yes	Solifluction lobes; glaciated and unglaciated subarctic landforms; diversity of alpine plant communities
4. Natural hazards	No	No known natural hazards

Does the Proposed ACEC contain one or more of the important values?

Important Values	Yes/No	Rationale for Determination
More than locally significant	Yes	Natural systems: Mount Prindle RNA has an unusually high number of scientifically and educationally interesting natural features, both rare and typical of the central and western portion of the Yukon-Tanana Uplands, within a relatively compact area. Wildlife: Year-round habitat for a subpopulation of Dall sheep and one mineral lick. The area is calving and postcalving habitat for the White Mountains caribou herd and, historical habitat for the Fortymile caribou herd. Dall sheep are very limited in distribution in Interior Alaska, and the Yukon-Tanana Uplands in particular. Caribou are important culturally and for sport and subsistence harvest. The Fortymile caribou herd is an international herd and one of the most important subsistence resources in east central Alaska. Scenic: This area is unique in landform (cliff systems, cirque headwall, tors, terraces, debris torrent channels, stone stripes, moraines), vegetation (unique plants), and color (vivid colors from vegetation against rock faces) from the surrounding landscape.

Mount Prindle Existing Research Natural Area and Proposed Expansion (Map 59))		
Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	Yes	Natural systems: It contains excellent examples of both glaciated landforms and periglacial (unglaciated) features. The solifluction lobes, produced by the periglacial processes, are some of the best developed in central Alaska. Two recently active debris torrent channels have carved the east face of Mount Prindle, providing spectacular evidence of large-scale weathering processes. RNA system "type needs" listed for the Mount Prindle RNA include periglacial features, cliffs, animals (Dall sheep, caribou, wheatear), a rare plant (*Draba densifolia*) and several plant communities. Other rare plants occur in the proposed RNA (*Ranunculus glacialis var. camissonis* and *Minuartia biflora*). Wildlife: Mineral licks are rare and important habitats for ungulates. Calving and postcalving habitats for caribou are considered the most sensitive seasonal habitats. Dall sheep have specialized habitat requirements. In addition to Dall sheep, caribou, and northern wheatear habitat, the proposed RNA contains at least two gyrfalcon and one peregrine falcon nest sites. Scenic: This area is rare and unique in landform (cliff systems, cirque headwall, tors, terraces, debris torrent channels, stone stripes, moraines,), vegetation (unique plants), and color (vivid colors from vegetation against rock faces) from the surrounding landscape.
Has been recognized as warranting protection	Yes	Natural systems: The RNA has been recognized as warranting protection due to its high potential for supporting public education and scientific research. Wildlife: The RNA has been recognized as warranting protection due to its high potential for supporting public education and scientific research.
Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare	No	None identified
Significant threat to human life/safety or property	No	None identified
Summary of Important Values: Wildlife, natural systems, and scenic.		
Does the area require special management to protect important and relevant resources?		
Wildlife: Yes. See White Mountains and Steese ACEC nominations. Natural System: Yes. Special management is required to protect the RNA for future research and education. Scenic: Yes. Special management is required to protect the scenic quality of the glacial and periglacial landforms.		
Findings: The existing RNA meets the relevance and importance criteria for natural systems and scenic. The proposed expansion area meets the relevance and importance criteria for wildlife resource. The current RNA boundary will be retained. An area including the proposed expansion area was nominated as an ACEC and is evaluated under the Steese and White Mountains ACEC nominations.		

Mount Prindle Existing Research Natural Area and Proposed Expansion (Map 59))	
Rationale:	Cultural: The Importance Criteria, in terms of cultural resources, emphasizes the presence of cultural sites that have substantial significance and values, are rare, or have qualities of more than local significance. The single log cabin ruin site known in the proposed expanded boundary does not meet these criteria. While it may meet federal criteria for significance and be eligible to the National Register of Historic Places, it would do so at the local level (such as history of economic exploitation in the upper Beaver Creek drainage), not at the regional or national level. Neither is it a rare type site. There are one to two dozen examples of similar miners and trappers cabin in the encompassing White Mountains NRA. (No known religious sites or other sites important to Native Americans or Alaska Natives are known within or near the proposed expanded boundaries of the Mount Prindle RNA, or anywhere else within the surrounding White Mountains NRA or Steese National Conservation Area.) Current scoping efforts by the BLM for the Eastern Interior RMP have specifically addressed locating such sites with local, federally recognized Tribal groups. As yet, none have been made known to the BLM. Therefore, historic and cultural resources were not identified as relevant values.
Rationale:	Fish: Streams in the proposed area are likely to be high gradient, low productivity, and of low fishery value. Therefore, fish was not identified as a relevant value.
Rationale:	Wildlife: The proposed expansion has merit for protection of Dall sheep and caribou habitat. Protection of the existing RNA will not ensure continued use of the larger area by Dall sheep and caribou. Although the expanded area meets the relevance and importance criteria for wildlife, the planning team did not recommend expanding the RNA to protect wildlife resources. The expanded area is included in the larger White Mountains and Steese ACEC nominations that includes additional areas of Dall sheep habitat and caribou habitat. See those nominations in this appendix for more information.
Rationale:	Natural System: The RNA contains excellent examples of both glaciated landforms and periglacial (unglaciated) features. At least four glacial advances spanning several hundred thousand years are evident. The small glaciers of Mount Prindle were isolated in a vast unglaciated region and were barely nourished by the ice age climates. The features marking the fluctuations of these small glaciers are useful in studies of past climates. The periglacial landscape processes have operated for even longer periods and have produced remnant features such as tors and cryoplanation terraces, including depositional features such as solifluction lobes. The solifluction lobes in the RNA are some of the best developed in central Alaska. The proposed RNA includes habitat for three rare plants.
Rationale:	Scenic: There is no need to expand the RNA boundary for the purposes of protecting the scenic value. The existing management, RNA, national recreation area and national conservation area designations are sufficient to protect the scenic values of the glaciated landforms and periclacial features.

Upper Black River Watershed and Salmon Fork of the Black River (Map 59))

During scoping, the BLM received three nominations for an ACEC in the Upper Black River watershed. This area was nominated for historic, scenic, and cultural values, fish and wildlife resources, as an important source of subsistence resources for Chalkyitsik and Fort Yukon, and municipal water source for the village of Chalkyitsik. The area nominated included all BLM-managed lands within the Upper Black River watershed. During the public comment period on the Draft RMP and through government-to-government consultation with the Gwichaa Zhee Gwich'in and Chalkyitisk Tribal governments the BLM received some additional information on values in the upper Black River. The tribes requested that BLM expand the Salmon Fork ACEC to include all of the upper Black River watershed. This additional information was evaluated and the BLM determined that the additional information provided on the Draft RMP did not change the evaluation for this area. Only the Salmon Fork watershed is carried forward in the Proposed RMP as a potential ACEC.

Area Evaluated:

General Location	**General Description**	**Acreage**	**Values Considered**
Interior Alaska, north and east of the Yukon River	Upper Black River watershed	1,578,000	historic, cultural, fish, wildlife, scenic

Does the proposed ACEC contain one or more relevant values?

Relevant Values	Yes/No	Rationale for Determination
1. A significant historic or cultural value	No	Three known surveys have occurred and 19 prehistoric and historic sites have been identified on BLM-managed lands in this area. These sites are not significant.
2. A significant scenic value	Yes	Scenic value is high on a little over half of the proposed area, with the scenic quality (Class A rating) of the area having high values in natural landscape characteristics of landform, vegetation, water, color, influence of adjacent scenery, scarcity and little or no impacts from cultural modifications.
3. A fish or wildlife resource	Yes	The Salmon Fork of the Black River is an undisturbed, pristine watershed supporting a wide variety of anadromous and resident fish. A nesting population of bald eagles occur. Caribou habitat (core and general winter range) occurs in higher elevations of the proposed area. Wildlife utilized for subsistence by residents of Fort Yukon and Chalkyitsik, including moose and furbearers, is present.
4. A natural process or system	Yes	An intact and undisturbed river system that is in proper functioning condition. Two significant caves are found in the Salmon Fork watershed. The area north of the main stem of the Salmon Fork supports significant populations of two rare plant species, *Antennaria densifolia* (G2S2) and *Ranunculus turneri* (G2G3S2), recommended for BLM Alaska sensitive status and one BLM Alaska sensitive plant species, *Physaria calderi* , Calder's Bladderpod (G3G4 S2). Steep south facing bluffs may support a number of BLM Alaska sensitive species, including *Erysimum asperum* var. *angustatum*.
5. Natural hazards	No	No known natural hazards

Does the Proposed ACEC contain one or more of the important values?

Important Values	Yes/No	Rationale for Determination

Upper Black River Watershed and Salmon Fork of the Black River (Map 59))		
More than locally significant	No	Cultural and Historic: Known prehistoric and historic sites on the Salmon Fork are not more than locally significant. Outside of the Salmon Fork, the site potential is unknown.
	No	Scenic: The scenic values associated with the Ogilvie Mountains and eastern portions of the Porcupine Plateau is unique in the eastern portion of the state with steep mountains and deep narrow valleys in sharp contrast to low flat ridges with gentle slopes and broad flat valleys to the west. However, only half of the proposed area is covered by this the higher value scenery while the other half has a lower value of scenic quality (Class B).
	Yes*	Fish: The Salmon Fork headwaters are in Canada and it serves as a migration corridor for salmon returning to spawn in Canada. It is a tributary of the Yukon River which is managed subject to international agreements with Canada.
	Yes*	Wildlife: The nominated area includes fall and winter range for the Porcupine caribou herd. The identified habitats are near the edge of the herd's range, may not be used in all years, and constitute a small portion of available winter habitat. However, the herd is culturally important for communities in Alaska and Canada and is the subject of an international agreement with Canada.
	No	Natural systems: Most river systems in Alaska are intact, mostly undisturbed, and in proper functioning condition.
Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	No	Cultural and Historic: Both the historic and prehistoric sites types found in the nominated area are not particularly rare.
	No	Scenic: The scenic values associated with the Ogilvie Mountains and eastern portions of the Porcupine Plateau is unique in the eastern portion of the state with steep mountains and deep narrow valleys in sharp contrast to low flat ridges with gentle slopes and broad flat valleys to the west. However, only half of the proposed area is covered by this the higher value scenery while the other half has a lower value of scenic quality (Class B).
	Yes*	Fish: The Salmon Fork contains spawning and rearing habitat for both anadromous and resident fish species. K.T. Alt (1987) found evidence to suggests sheefish spawn in the Salmon Fork. There are only five known sheefish spawning locations in the entire Yukon River drainage.
	Yes*	Wildlife: The Black River (including portions of the Salmon Fork and Grayling Forks) supports nesting bald eagles. This population may be the northernmost population of bald eagles of at least moderate density in Alaska.
	Yes*	Natural systems: The area north of the main stem of the Salmon Fork supports significant populations of one BLM Alaska sensitive plant species and several rare species considered for inclusion on the BLM Alaska Sensitive Species List. Cave and karst resources are rare in the Arctic. Two significant caves are found in the Salmon Fork

<table>
<tr><th colspan="3">Upper Black River Watershed and Salmon Fork of the Black River (Map 59))</th></tr>
<tr><td></td><td></td><td>drainage. The two significant caves are extremely remote and difficult to access, and do not require special management.</td></tr>
<tr><td>Has been recognized as warranting protection</td><td>No</td><td>None identified</td></tr>
<tr><td>Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare</td><td>No</td><td>None identified</td></tr>
<tr><td>Significant threat to human life/safety or property</td><td>No</td><td>None identified</td></tr>
<tr><td colspan="3">Summary of Important Values: Fish and wildlife and natural systems</td></tr>
<tr><td colspan="3">Does the area require special management to protect important and relevant resources?</td></tr>
<tr><td colspan="3">Fish: Land disturbing activities have the potential to jeopardize and/or adversely affect the waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity. Restoration of these habitats after disturbance is extremely difficult in Alaska and may take many decades. Restrictions or limitations on these types of activities are needed.
Wildlife: Water quality in Salmon Fork and Grayling Fork should be maintained to support nesting Bald Eagles and restrictions on industrial activity in vicinity of nests should be enacted. Coordination and notification with Canadian Government is required prior to developments affecting Porcupine caribou habitat. Provisions should be made in management to allow the herd to continue to utilize habitats in the area. Special management will aid but is not considered required for the protection of caribou habitat.
Natural systems: Limestone habitats and steep south facing slopes and bluffs should be managed to minimize impacts on rare flora. Special management will aid but is not considered required for the protection of rare and sensitive plants.</td></tr>
<tr><td colspan="3">Findings: *The Salmon Fork Watershed (621,000 acres) meets the relevance and importance criteria and should be considered for ACEC designation in the Proposed RMP/Final EIS (Map 69). The remainder of the nominated area does not meet the criteria and is not considered for designation.</td></tr>
<tr><td>Rationale:</td><td colspan="2">Cultural: Outside of the Salmon Fork, the prehistoric site potential of the vast majority of the proposed ACEC is unknown. No known religious sites or other sites important to Native Americans or Alaska Natives are known within the boundaries of the proposed ACEC. There is no data on which to recommend an ACEC designation for this area based upon cultural resources.
Regarding the Salmon Fork, the 20th century log cabin ruins do not meet the criteria. Nor are these sites particularly rare in Interior Alaska. Hundreds if not thousands of such sites (such as 1910s–1950s trapping cabins) exist on the landscape. Known prehistoric sites along the Salmon Fork do not meet the importance criteria. The site types found are not particularly rare, they are mostly surface lithic sites (some apparently have a shallow subsurface component), with no known organic artifacts or ecofacts present, and with no features presently known. They are situated on high topographic, exposed locations along the rivers. As such, they are likely summer-oriented, brief campsites. None are village sites. There are no known quarry sites. No artifacts indicating any occupation beyond the mid-Holocene were located (no artifacts associated with early Holocene or late-Pleistocene occupations association with addressing Peopling of the New World research questions). While the sites, individually and collectively may meet federal criteria for significance and be eligible to the National Register of Historic Places, they would only do so at the local (e.g., Salmon River drainage) or sub-regional (e.g., eastern-central Interior Alaska) geographic levels, and not at the regional (e.g., Alaska-wide) or national level.
Protections afforded to cultural resources by existing federal legislation are adequate for the cultural resources that may be expected to be found in the area. No special management is needed.</td></tr>
</table>

Upper Black River Watershed and Salmon Fork of the Black River (Map 59))	
Rationale:	Fish: The watershed of the Salmon Fork Black River (4th level HUC #194040204) meets the importance criteria. The Salmon Fork is an undisturbed pristine watershed supporting a wide variety of anadromous and resident fish species. Local residents in the Black River area have long used its fisheries resources for subsistence purposes and the Black River and its tributaries, primarily the Salmon Fork, are considered the most productive sources of fish for residents of Chalkyitsik. Anadromous fish stocks destined for the Salmon Fork contribute to subsistence fishing opportunities along more than 900 miles of the Yukon River. With declining salmon stocks in the Yukon River one might consider all of its anadromous fish producing tributaries to be of important value. The headwaters of the Salmon Fork originate in Canada, therefore, the portion of the Salmon Fork located in the U.S. is a migration corridor for anadromous fish stocks returning to spawn in Canada. The Salmon Fork contains high quality and diverse fishery resources, with at least eight species of fish including Chinook salmon and a significant run of fall chum salmon. The Salmon Fork contains critical spawning and rearing habitat for both anadromous and resident fish species. Aerial surveys estimate escapement of fall chum between 444 and 3,098 fish. Aerial estimates of abundance are always lower than actual escapements even in optimal survey conditions (Barton 1984). Local residents report that coho and fall chum spawn in open water springs found on Kevinjik (slightly upstream of BLM lands) and Tetthaajik Creeks during the late fall. Sheefish use the Salmon Fork for summer feeding and K. T. Alt (1987) found evidence that suggests sheefish spawn in the Salmon Fork. There are only five known sheefish spawning locations in the entire Yukon River drainage. Alt accurately predicted sheefish spawning areas in the upper Nowitna River drainage which has since been documented. The Salmon Fork also contains a very healthy Arctic grayling population.
Rationale:	Wildlife: The nominated area meets the relevance and importance criteria. Some resources may require special management. Subsistence: Trapping and harvest of moose and caribou have occurred within the Salmon Fork (Caulfield 1983). However, these activities also occur along the Porcupine River and mainstem of the Black River. Harvest of fall caribou is reported occasionally in the headwaters of the Salmon Fork, however; it is a small area compared to the entire caribou harvest area and significantly farther from the village of Chalkyitisk. Porcupine herd caribou migrate through and winter in portions of BLM-managed lands in the Black River drainage. Given the whole picture of trapping and caribou and moose hunting land use, the portions of BLM-managed lands are small. Further input from local residents would provide specific information on whether or not these are critically important areas for subsistence resources. The Black River drainage includes general and core fall and winter range for the Porcupine caribou herd. The identified areas of winter range are generally higher elevations and may be valuable winter range because higher elevations tend to burn less frequently, allowing more time for forage lichens to develop. Most seasonal caribou habitats (e.g., calving and postcalving) are considered of higher value and more sensitive than winter habitats. In addition, the identified habitats are near the edge of the herd's range and may not be used in all years. However, the Porcupine herd is an international herd of high value to subsistence hunters and First Nations people and the subject of an international agreement with Canada. Provisions should be made in management to allow the herd to continue to use these winter habitats. Caribou habitats are considered relevant and important values. Special management will aid, but is not required, to protect caribou habitat. Relatively little of the mapped caribou range in the subunit occurs outside of the Salmon Fork. Bald Eagles nest primarily along the Salmon Fork, but a few nest on the lower Grayling Fork. Most of the Grayling Fork drainage is closed to mineral location, entry, and leasing in Alternative E, so special management is not required to protect bald eagles nesting outside of the Salmon Fork. Moose are highly valued for subsistence by local residents, but based on available information, do not meet the importance criteria for either the Salmon Fork or for the entire Black River drainage. Moose resources in the proposed ACEC have not been shown to meet criteria 2 or 3 (i.e., not particularly fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change, nor recognized as warranting protection for national priority concerns or to carry

Upper Black River Watershed and Salmon Fork of the Black River (Map 59))	
	out mandates of FLPMA). Some comments suggested that the opportunity to readily harvest moose is vulnerable to adverse change (e.g., from increased access in this currently very remote area), however, the area moose population itself would not be similarly vulnerable. Regarding criteria 1, it is possible that the resource could be considered to have ". . . more than locally significant qualities which give it special worth, consequence, [or] meaning. . . ." due to the importance of the resource to communities as far away as Fort Yukon. Comments mention harvest data that might support this. However, that data has not been made available to the BLM. Available recent data , although only for three years of harvest, do not support the comment that "*the greatest percentage of moose harvested by Chalkyitsik residents, and a significant percentage harvested by Fort Yukon residents, are taken up the Grayling Fork, Bull river, Wood River, and the uppermost main stem Black River.*" Data from three year harvest reports indicate that 34 percent of Chalkyitsik moose harvest and 5 percent of Fort Yukon moose harvest occurred in harvest reporting game management subunits that encompassed upper Black River tributaries (Stevens and Maracle 2012, Van Lanen et al 2012). An unknown portion of this harvest could have occurred on the large portion of these game management units that is non-BLM land.
Rationale:	Natural System: The upper Black River is extremely remote and difficult to access. It is likely to remain in proper functioning condition without special management. Relevant and important resources are concentrated in the Salmon Fork watershed. The significant caves meet the relevance and importance criteria but do not require special management. Rare and sensitive plants meet the relevance and importance criteria, but do not require special management.
Rationale:	Scenic: The scenic values associated with the Ogilvie Mountains and eastern portions of the Porcupine Plateau is unique in the eastern portion of the state with steep mountains and deep narrow valleys in sharp contrast to low flat ridges with gentle slopes and broad flat valleys to the west. However, only half of the proposed area is covered by this the higher value scenery. No special management is needed to protect scenic values.

<table>
<tr><td colspan="4">Fortymile ACEC (Maps 60, 61, 62, and 63)</td></tr>
<tr><td colspan="4">Internal BLM nomination for caribou calving and postcalving habitat and Dall sheep habitat</td></tr>
<tr><td colspan="4">Area Evaluated:</td></tr>
<tr><td>General Location</td><td>General Description</td><td>Acreage</td><td>Values Considered</td></tr>
<tr><td>Northern portion of the Fortymile Subunit</td><td>Caribou calving and postcalving habitat, Dall sheep habitat, mineral licks.</td><td>732,000</td><td>Wildlife, scenic</td></tr>
<tr><td colspan="4">Does the proposed ACEC contain one or more relevant values?</td></tr>
<tr><td>Relevant Values</td><td>Yes/No</td><td colspan="2">Rationale for Determination</td></tr>
<tr><td>1. A significant historic or cultural value</td><td>No</td><td colspan="2">No known cultural or archaeological sites.</td></tr>
<tr><td>2. A significant scenic value</td><td>Yes</td><td colspan="2">Scenic value is high with the scenic quality (Class A rating) of the area having high values in natural landscape characteristics of landform, vegetation, water, color, influence of adjacent scenery, scarcity and little or no impacts from cultural modifications.</td></tr>
<tr><td>3. A fish or wildlife resource</td><td>Yes</td><td colspan="2">Fortymile caribou herd calving and postcalving habitat and Yukon-Tanana Uplands Dall sheep habitat.</td></tr>
<tr><td>4. A natural process or system</td><td>No</td><td colspan="2">None identified</td></tr>
<tr><td>5. Natural hazards</td><td>No</td><td colspan="2">No known natural hazards</td></tr>
<tr><td colspan="4">Does the Proposed ACEC contain one or more of the important values?</td></tr>
<tr><td>Important Values</td><td>Yes/No</td><td colspan="2">Rationale for Determination</td></tr>
<tr><td>More than locally significant</td><td>Yes</td><td colspan="2">Wildlife: Dall sheep are very limited in distribution in Interior Alaska and the Yukon-Tanana Uplands in particular. Caribou are important culturally and for sport and subsistence harvest. The Fortymile caribou herd is an international herd and one of the most important subsistence resources in east central Alaska.
Scenic: This area is unique in landform (scattered irregular mountains and V to U shaped valleys), vegetation (four major vegetative communities), water (complex river system with incised drainages) and color (vivid colors from diverse vegetation against rock and water) from the surrounding landscape.</td></tr>
<tr><td>Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change</td><td>Yes</td><td colspan="2">Wildlife: Mineral licks are rare and important habitats for ungulates. Calving and postcalving habitats for caribou are considered the most sensitive seasonal habitats. Dall sheep have specialized habitat requirements.
Scenic: This area contains portions of the Fortymile Wild and Scenic River with identified Outstandingly Remarkable Scenic Values for Champion Creek, Upper North Fork, Joseph Creek and Middle Fork, under the Wild and Scenic Rivers Act.</td></tr>
<tr><td>Has been recognized as warranting protection</td><td>Yes</td><td colspan="2">Wildlife: See above and in “Rationale” below.</td></tr>
<tr><td>Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare</td><td>No</td><td colspan="2">None identified</td></tr>
<tr><td>significant threat to human life/safety or property</td><td>No</td><td colspan="2">None identified</td></tr>
<tr><td colspan="4">Summary of Important Values: Wildlife and scenic.</td></tr>
<tr><td colspan="4">Does the area require special management to protect important and relevant resources?</td></tr>
</table>

Fortymile ACEC (Maps 60, 61, 62, and 63)	
Wildlife: Yes. Without long-term special management the value of these areas as wildlife habitat will likely be reduced. Scenic: Yes in that portion of the ACEC within the viewshed of the Fortymile Wild and Scenic River. Special management is required to protect the scenic quality of the viewshed of a designated "wild" segment under the Wild and Scenic Rivers Act.	
Findings: The nominated area meets the relevance and importance criteria and should be considered for ACEC designation in the Draft RMP/EIS.	
Rationale	Dall Sheep: Dall sheep are an important component of biological diversity and recreational opportunity of the area. Alaska is the only state which harbors Dall sheep, and BLM lands support the majority of Dall sheep in the Yukon-Tanana Uplands. In Canada, Dall sheep are found only in portions of Yukon and Northwest Territories, while Stone sheep (a Dall sheep subspecies) occur in portions of Yukon Territory and northern British Columbia. Within Alaska, Dall sheep are most abundant and widespread in the large mountain ranges—Brooks Range and Alaska Range/Chugach Range/Wrangell Mountains. The Yukon-Tanana Uplands are non-typical Dall sheep habitat, supporting small scattered populations of sheep in isolated areas of rugged terrain. Much of the habitat is just above treeline and sheep often make use of areas below treeline. Occurring as small populations, these sheep are relatively more susceptible to local population extinction. Climate change could potentially result in decreasing area and quality of these patchy near-treeline habitats, and warmer winter weather could result in icing conditions that might restrict access to forage. Wild sheep are sensitive to human disturbance and often avoid areas of human disturbance. Where sheep continue use of habitats in the presence of human disturbance, physiological stress and increased susceptibility to disease may result. When important habitats are located at a distance from rugged escape terrain, susceptibility to the effects of disturbance are greater. Dall sheep in many areas within the planning area, by necessity utilize low-security habitats for foraging and for mineral acquisition, and so are more susceptible to disturbance. When disturbed, the discontinuous nature of escape terrain also may result in extensive flight distances to reach the next suitable patch of escape terrain. Many of the mineral licks used by these populations occur at low elevation and require long distance travel through low-security habitats (e.g., tussock tundra and lowland black spruce forest and woodland). Sheep in these situations may be already stressed and susceptible to predation. Human activities may cause additional stress, add to predation risk, or result in abandonment or avoidance of the area. Heavy use of mineral licks by Dall sheep (especially in early summer) is considered indicative of the importance of these licks to the population and they are considered crucial habitats. Dall sheep make intensive, regular use of relatively small areas (near rugged terrain and mineral licks). Protection of sheep habitat requires applying use restrictions to only minor portions of the planning area. Most Dall sheep habitat occurs within areas of caribou calving habitat.

Fortymile ACEC (Maps 60, 61, 62, and 63)	
Rationale	Caribou: The White Mountains caribou herd is an important component of biological diversity and recreational opportunity in the White Mountains NRA and Steese National Conservation Area and occurs in the northwestern portion of the historical range of the Fortymile caribou herd. Preliminary genetic analysis, indicates that the White Mountains herd may possibly be more closely related to woodland caribou herds in Canada than Alaska barren ground caribou herds. The much larger Fortymile herd is one of the most important subsistence resources in east central Alaska. Once estimated to number more than 500,000 animals, the herd is also an international resource, with a considerable portion of the historical range occurring in Canada. (The herd once ranged as far as Whitehorse, Yukon Territory). It remains one of the seven largest herds in Alaska, and one of the few large herds accessible by road. A precedent-setting cooperative planning process focuses on the goal of recovery of the herd in numbers and range. The habitats considered most sensitive for this herd are calving and postcalving, and the Fortymile Caribou Herd Planning Team recommended these be given the highest priority in management. During calving and postcalving time periods caribou are concentrated in specific habitats which are limited in extent. Caribou have been shown to be sensitive to disturbance. Studies of Prudhoe Bay oil development have indicated that caribou avoid oil field roads and facilities and distribution of calving has shifted away from oil fields. In addition, the caribou cows that do continue to use the oil field

Fortymile ACEC (Maps 60, 61, 62, and 63)	
	area during calving appear to have lower reproductive success. The population-level effects on caribou from a given level of activity or development in calving habitats cannot at this time be predicted. Although sufficient calving habitat may exist to allow caribou to shift to undeveloped portions of calving range, the increased reliance on a smaller set of calving habitats may have negative consequences for long-term herd population dynamics, such as, shifting of calving grounds may reduce predation, improve forage conditions, and provide resiliency in response to changing weather, forage, and insect conditions. Caribou population declines have occurred as a result of overuse by caribou of calving and summer range forage. Climate in the planning area is predicted to become warmer and drier (increases in summer precipitation will not keep pace with the increase in evapotranspiration). It is likely that tree-line will slowly rise and alpine tundra will become shrubbier. These changes would increase the importance of specific alpine and subalpine habitats for calving and postcalving caribou. Looking at worldwide caribou and reindeer populations, Vors and Boyce (2009) concluded: "The cumulative effects of phenology changes, spatial and temporal changes in species overlap, and extreme weather events are thus significant threats to the long-term persistence of caribou and reindeer." They showed that most caribou herds in the world are currently in decline, coincident with climate change and human-caused landscape change. With the completion of BLM land conveyance, state lands and private lands within caribou calving and postcalving habitats and sheep habitats are likely to experience mineral development and the associated development of roads and trails. These developments will increase the importance of federal lands for maintenance of caribou and Dall sheep populations. BLM lands that will remain after selections are generally considered of lower potential for occurrence of minerals. Designation and management of calving and posctalving habitats in ACECs may conserve caribou and Dall sheep while allowing access to mineral resources of the region. Focusing on limiting impacts to the most critical habitats in these areas would be the most efficient strategy for maintaining this important northern resource. In ANILCA, Congress directed that caribou range should be a special value in management of the Steese National Conservation Area. At the time, much of the Steese had been used for calving by Fortymile caribou. In recent years, Fortymile caribou have concentrated in habitats located more to the south and east, areas contained in the Fortymile ACEC.
Rationale	Scenic: The proposed area has merit for protection of Outstandingly Remarkable Scenic Values of this portion of the Fortymile Wild and Scenic River managed as a Visual Resource Management (VRM) Class I which is to preserve the existing character of the landscape. A VRM Class I provides for natural ecological changes; however, it does not preclude very limited management activities. The level of change to the characteristic landscape should be very low and must not attract attention. The proposed area has merit for protection of scenic values within the viewshed of this portion of the Fortymile Wild and Scenic River managed as a VRM Class II which is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. This area is unique in landform, vegetation, water, color and has little impacts from cultural modifications. See Appendix E.2.3 for a discussion of outstandingly remarkable scenic values in the Fortymile River system.

Steese ACEC (Maps 64, 65, and 66)

Internal BLM nomination for caribou calving and postcalving habitat and Dall sheep habitat

Area Evaluated:

General Location	**General Description**	**Acreage**	**Values Considered**
Steese National Conservation Area	Caribou calving and postcalving habitat, Dall sheep habitat, mineral licks.	927,000	Wildlife, scenic

Does the proposed ACEC contain one or more relevant values?

Relevant Values	Yes/No	Rationale for Determination
1. A significant historic or cultural value		No known historic or cultural sites.
2. A significant scenic value	Yes	Scenic value, however, is high with the scenic quality (Class A rating) of the area having high values in natural landscape characteristics of landform, vegetation, water, color, influence of adjacent scenery, scarcity and having little or no impacts from cultural modifications.
3. A fish or wildlife resource	Yes	White Mountains caribou herd habitat, current and historic Fortymile caribou herd calving and postcalving habitat, Dall sheep habitat; mineral licks.
4. A natural process or system	Yes	Boreal forest ecosystem
5. Natural hazards	No	No known natural hazards

Does the Proposed ACEC contain one or more of the important values?

Important Values	Yes/No	Rationale for Determination
More than locally significant	Yes	Wildlife: Dall sheep are very limited in distribution in Interior Alaska and the Yukon-Tanana Uplands in particular. Caribou are important culturally and for sport and subsistence harvest. The Fortymile caribou herd is an international herd and one of the most important subsistence resources in east central Alaska. Scenic: Scenic value is high on a little over half of the proposed area, with the scenic quality (Class A rating) of the area having high values in natural landscape characteristics of landform, vegetation, water, color, influence of adjacent scenery, scarcity and little or no impacts from cultural modifications.
Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change	Yes	Wildlife: Mineral licks are rare and important habitats for ungulates. Calving and postcalving habitats for caribou are considered the most sensitive seasonal habitats. Dall sheep have specialized habitat requirements. Scenic: This area contains portions of the Birch Creek Wild and Scenic River with identified Outstandingly Remarkable Scenic Values under the Wild and Scenic Rivers Act (Appendix E.2.1).
Has been recognized as warranting protection	Yes	Wildlife: In creating the Steese National Conservation Area, Congress directed that caribou habitat be one of two special values to be considered in planning and management of the area.
Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare	No	None identified
Significant threat to human life/safety or property	No	None identified

Summary of Important Values: Wildlife and scenic

<table>
<tr><th colspan="2">Steese ACEC (Maps 64, 65, and 66)</th></tr>
<tr><td colspan="2">Does the area require special management to protect important and relevant resources?</td></tr>
<tr><td colspan="2">Wildlife: Yes. Without long-term special management the value of these areas as wildlife habitat will likely be reduced.
Scenic: Yes. Special management is required to protect the scenic viewshed of a designated “wild” segment under the Wild and Scenic Rivers Act.</td></tr>
<tr><td colspan="2">Findings: The nominated area meets the relevance and importance criteria and should be considered for ACEC designation in the Draft RMP/EIS.</td></tr>
<tr><td>Rationale:</td><td>Caribou and Dall sheep: See Fortymile ACEC evaluation, rationale.</td></tr>
<tr><td>Rationale:</td><td>Scenic: The proposed area has merit for protection of Outstandingly Remarkable Scenic Values of this portion of Birch Creek Wild and Scenic River managed as a Visual Resource Management (VRM) Class I which is to preserve the existing character of the landscape. A VRM Class I provides for natural ecological changes; however, it does not preclude very limited management activities. The level of change to the characteristic landscape should be very low and must not attract attention. These drainages are unique in landform, vegetation, water, color and have little impacts from cultural modifications. The proposed area has merit for protection of scenic values within the viewshed of this portion of Birch Creek Wild and Scenic River managed as a VRM Class II which is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. This area is unique in landform, vegetation, water, color and has little impacts from cultural modifications.</td></tr>
</table>

<table>
<tr><td colspan="4">White Mountains ACEC (Map 64)</td></tr>
<tr><td colspan="4">Internal BLM nomination for caribou calving and postcalving habitat and Dall sheep habitat</td></tr>
<tr><td colspan="4">Area Evaluated:</td></tr>
<tr><td>General Location</td><td>General Description</td><td>Acreage</td><td>Values Considered</td></tr>
<tr><td>White Mountains National Recreation Area</td><td>Caribou calving and postcalving habitat; Dall sheep habitat; mineral licks.</td><td>589,000</td><td>wildlife, scenic</td></tr>
<tr><td colspan="4">Does the proposed ACEC contain one or more relevant values?</td></tr>
<tr><td>Relevant Values</td><td>Yes/No</td><td colspan="2">Rationale for Determination</td></tr>
<tr><td>1. A significant historic or cultural value</td><td>No</td><td colspan="2">No known historic or cultural sites.</td></tr>
<tr><td>2. A significant scenic value</td><td>Yes</td><td colspan="2">Scenic value is high with the scenic quality (Class A rating) of the area having high values in natural landscape characteristics of landform, vegetation, water, color, influence of adjacent scenery, scarcity and having little or no impacts from cultural modifications.</td></tr>
<tr><td>3. A fish or wildlife resource</td><td>Yes</td><td colspan="2">White Mountains caribou herd habitat, historic Fortymile caribou herd calving and postcalving habitat, Dall sheep habitat; mineral licks.</td></tr>
<tr><td>4. A natural process or system</td><td>Yes</td><td colspan="2">Boreal forest ecosystem</td></tr>
<tr><td>5. Natural hazards</td><td>No</td><td colspan="2">No known natural hazards</td></tr>
<tr><td colspan="4">Does the Proposed ACEC contain one or more of the important values?</td></tr>
<tr><td>Important Values</td><td>Yes/No</td><td colspan="2">Rationale for Determination</td></tr>
<tr><td>More than locally significant</td><td>Yes</td><td colspan="2">Wildlife: Dall sheep are very limited in distribution in Interior Alaska and the Yukon-Tanana Uplands in particular. Caribou are important culturally and for sport and subsistence harvest. The Fortymile caribou herd is an international herd and one of the most important subsistence resources in east central Alaska.
Scenic: This area is unique in landform (scattered irregular mountains with jagged tors and V to U shaped valleys), vegetation (four major vegetative communities), water (complex river system with incised drainages) and color (vivid colors from diverse vegetation against white rock and blue water) from the surrounding landscape.</td></tr>
<tr><td>Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change</td><td>Yes</td><td colspan="2">Wildlife: Mineral licks are rare and important habitats for ungulates. Calving and postcalving habitats for caribou are considered the most sensitive seasonal habitats. Dall sheep have specialized habitat requirements.
Scenic: This area contains portions of the Beaver Creek Wild and Scenic River with identified Outstandingly Remarkable Scenic Values under the Wild and Scenic Rivers Act.</td></tr>
<tr><td>Has been recognized as warranting protection</td><td>Yes</td><td colspan="2">Wildlife: See above and in "Rationale" below.</td></tr>
<tr><td>Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare</td><td>No</td><td colspan="2">None identified</td></tr>
<tr><td>significant threat to human life/safety or property</td><td>No</td><td colspan="2">None identified</td></tr>
<tr><td colspan="4">Summary of Important Values: Wildlife, scenic</td></tr>
<tr><td colspan="4">Does the area require special management to protect important and relevant resources?</td></tr>
</table>

White Mountains ACEC (Map 64)	
Wildlife: Yes. Without long-term special management the value of these areas as wildlife habitat could potentially be reduced. Scenic: Yes. Special management is required to protect the scenic quality of the viewshed of a designated "wild" segment under the Wild and Scenic Rivers Act.	
Findings: The nominated area meets the relevance and importance criteria and should be considered for ACEC designation in the Draft RMP/EIS.	
Rationale:	Caribou and Dall sheep: See Fortymile ACEC evaluation, rationale.
Rationale:	Scenic: The proposed area has merit for protection of Outstandingly Remarkable Scenic Values of this portion of Beaver Creek Wild and Scenic River managed as a Visual Resource Management (VRM) Class I which is to preserve the existing character of the landscape. A VRM Class I provides for natural ecological changes; however, it does not preclude very limited management activities. The level of change to the characteristic landscape should be very low and must not attract attention. These drainages are unique in landform, vegetation, water, color and have little impacts from cultural modifications. The proposed area has merit for protection of scenic values within the viewshed of this portion of Birch Creek Wild and Scenic River managed as a VRM Class II which is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. This area is unique in landform, vegetation, water, color and has little impacts from cultural modifications.

Mosquito Flats ACEC (Map 63)

Public nomination during the public comment period on the Draft RMP. This area was nominated due to: its value as a large, contiguous wetland; the largest and most heavily used moose calving area in Game Management Unit 20E; and waterfowl nesting and resting habitat.

Area Evaluated:

General Location	**General Description**	**Acreage**	**Values Considered**
Mosquito Flats	Contiguous wetlands in the upper Mosquito Fork drainage	37,000 acres	Natural system, wildlife, scenic

Does the proposed ACEC contain one or more relevant values?

Relevant Values	Yes/No	Rationale for Determination
1. A significant historic or cultural value	No	The few cultural resources that are known within the boundaries of proposed ACEC are not substantially significant.
2. A significant scenic value	Yes	Scenic value is high with the scenic quality (Class A rating) of the area having high values in natural landscape characteristics of landform, vegetation, water, color, influence of adjacent scenery, scarcity and having little or no impacts from cultural modifications.
3. A fish or wildlife resource	Yes	The area contains high density moose calving, trumpeter swan nesting, good short-eared owl habitat, and a large complex of floating bog wetland vegetation encircled by mountains.
4. A natural process or system	Yes	The distinct sand beds of the Mosquito Fork River provide aquatic habitat unique to eastern interior Alaska. In low-relief wetland environments of Interior Alaska stream beds are dominantly dark organic-rich silt. However, in the Mosquito Flats wetlands the Mosquito Fork River flows over continuous sand beds that are uncharacteristically clean, light colored, well-sorted, and low in organics, suggesting origin of the sand is likely from a past depositional environment, possibly related to eolian deposits of Pleistocene or later age reported by Reger and others (2011).
5. Natural hazards	No	No known natural hazards

Does the Proposed ACEC contain one or more of the important values?

Important Values	Yes/No	Rationale for Determination
More than locally significant	Yes	Wildlife: Mosquito Flats is an important moose calving area (and summer habitat) for the regional moose population (Gasaway 1992). The importance of Mosquito Flats in supporting nesting waterfowl is unknown, except that it supports multiple nesting trumpeter swans (a BLM Alaska sensitive species). It is utilized by short-eared owls (another BLM Alaska sensitive species) in high enough densities to be chosen as an area to test new capture techniques (Booms 2012). It likely also supports other BLM Alaska sensitive species, including olive-sided flycatcher, rusty blackbird, and blackpoll warbler. Wetlands: The sand-bed river provides unique aquatic habitat essential for maintaining habitat and species diversity within the planning area. Scenic: This area is unique in landform (scattered irregular mountains and V to U shaped valleys), vegetation (four major vegetative communities), water (complex river system with incised drainages) and color (vivid colors from diverse vegetation against rock and water) from the surrounding landscape.

<table>
<tr><th colspan="3">Mosquito Flats ACEC (Map 63)</th></tr>
<tr><td>Is fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change</td><td>Yes</td><td>Wildlife: Wetland habitats in general, and floating bog wetlands, in particular, can be sensitive to use by OHVs and airboats (Zacheis and Doran 2009).

Wetlands: The surface hydrology of the Mosquito Flats wetland area is sensitive to damage by summer use of Off Highway Vehicles (OHV), either through thermokarst action where the vegetation mat is broken or by repeated stream crossing over easily erodible sand banks and channels. OHV tracks through the wetlands would alter surface water flow paths to the Mosquito Fork River as well substantially increase input of silt and organics to the stream.</td></tr>
<tr><td>Has been recognized as warranting protection</td><td>Yes</td><td>Wildlife: See above and in Rationale below.
Wetlands: See above.</td></tr>
<tr><td>Has qualities which warrant highlighting to satisfy management concerns about safety and public welfare</td><td>No</td><td>None identified</td></tr>
<tr><td>significant threat to human life/safety or property</td><td>No</td><td>None identified</td></tr>
<tr><td colspan="3">Summary of Important Values: wildlife, wetlands, scenic</td></tr>
<tr><td colspan="3">Does the area require special management to protect important and relevant resources?</td></tr>
<tr><td colspan="3">Wetlands: Yes. The proposed Mosquito Flats ACEC would require special management attention to protect surface hydrology of the Mosquito Flats wetlands and associated unique aquatic habitat essential for maintaining habitat and species diversity within the planning area.
Wildlife: Possibly. Seasonal restrictions to prevent disturbance of nesting waterfowl and calving and postcalving moose is not currently needed, but could potentially be in the future.

Scenic: No. Special management may aide in protecting the scenic viewshed of a designated "wild" segment under the Wild and Scenic Rivers Act, but it is not required.</td></tr>
<tr><td colspan="3">Findings: The nominated area meets the relevance and importance criteria and should be considered for ACEC designation in the Proposed RMP/Final EIS.</td></tr>
<tr><td>Rationale:</td><td colspan="2">Wetland habitats in general, and floating bog wetlands, in particular, are sensitive to use by OHVs and airboats (Zacheis and Doran 2009). The types of management recommended would be those that prevent physical impairment of wetlands from OHVs. The ACEC would be particularly vulnerable to adverse change from summer OHV use. Motorized travel should be restricted to winter use only.

Placer mine operations utilizing heavy equipment have the potential to adversely impact soil resources and water quality through erosion of disturbed soils, periodic discharge of sediment laden water, and subsequent increased downstream turbidity. Mining operations could adversely impact the natural water quality and flow characteristics.</td></tr>
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Appendix D

Visual Resource Inventory

Appendix D. Visual Resource Inventory

D.1. Introduction

BLM's Land Use Planning Handbook H-1601–1 requires that the BLM designate VRM management classes for all areas of BLM land, based on an inventory of visual resources and management considerations for other land uses. The Eastern Interior Field Office conducted an inventory to determine the visual quality of all lands in the planning area. This appendix summarizes the methodology and results of the inventory, which is incorporated by reference into the RMP/EIS. The inventory with maps is available in BLM's Fairbanks District Office.

Methodology

Visual resource inventory (VRI) class areas for the planning area were delineated using the process in BLM's Visual Resource Inventory Handbook (H-8410-1). Visual resources are described in the context of the Visual Resource Management (VRM) system, which is used by the BLM to inventory and manage visual resources. This system provides an analytical method to analyze potential visual impacts and to apply visual design techniques to ensure that surface-disturbing activities are harmonious with their surroundings. The VRM system inventory is applied to the entire planning area, including non-federal lands (e.g., state, private) since adjacent lands impact the scenic quality and sensitivity of BLM-managed lands. However, management of visual resources will only occur on BLM-managed lands.

Implementing VRM involves conducting an inventory, establishing management classes, and providing an impact assessment. During the inventory stage, data are collected to identify the visual resources of an area in order to designate VRI classes. The inventory consists of a scenic quality evaluation, sensitivity level analysis, and a delineation of distance zones. These are described in the following sections.

Based on these three factors, BLM lands are placed into one of four VRI classes which represent the relative value of the visual resources. Classes I and II are the most valued, Class III representing a moderate value, and Class IV being of least value. The inventory classes provide the basis for considering visual values in the resource management planning process.

Once the visual resource inventory is completed, visual resource management classes (I-IV) are assigned to lands in the planning area during the planning process. The visual resource management classes for each alternative are described in Chapter 2 and displayed on Maps 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 and 25. The effects of the alternatives on visual resources are analyzed in Chapter 4.

D.2. Scenic Quality

Scenic quality is a measure of the visual appeal of a tract of land. All public lands have scenic value, but areas with the most variety and harmonious composition have the greatest value. The scenic quality evaluation describes the characteristic landscape and determines scenic-quality ratings for the visual resources (the land, water, vegetation, and structures that are visible on the land) of the planning area. The evaluation is intended to represent the overall impression a viewer has of the visual resources from several viewpoints or locations, rather than the view from any one location, including an aerial view, or during any one season of the year.

The planning area was used as the frame of reference for rating scenic quality. Physiographic Divisions of Alaska (Wahrhaftig 1965) were used as a foundation for each Scenic Quality Rating Unit (SQRU). The planning area can be divided into three major physiographic provinces: the Northern Plateaus Province, the Western Alaska Province, and the Alaska-Aleutian Province. These provinces are further divided into 11 physiographic divisions, forming a basis to describe the elements of landform, water, color and distinctiveness. Each of these divisions was considered a SQRU. The transitions between physiographic divisions are generally subtle.

Landform is characterized by vertical relief, spatial composition, and color. Water is characterized by its shape, pattern, and color. Color is defined by its relative scales of hue (classifications of red, yellow, green, blue, or combinations) and value (lightness and darkness), and intensity (degree or strength). Distinctiveness is a measure of uniqueness within a region.

Each SQRU was evaluated to determine its scenic quality and is rated as Class A, B or C. A Scenic Quality Field Inventory Form was developed for each SQRU. In some cases, there is more than one form if the SQRU occurred in more than one planning subunit. These inventory forms estimate the visual values which resulted in the Class A, B, or C rating. The SQRU classes are summarized below:

- Class A SQRU has a great deal of visual variety, contrast, and harmony.
- Class B SQRU has a moderate amount of visual variety, contrast, and harmony.
- Class C SQRU has little visual variety, contrast, and harmony.

D.2.1. Vegetative Types

Vegetation is an important component in determining the visual quality of an area. Vegetation is represented by species, variety, extent and color. The more variety of species a landscape has the higher the scenic quality. General vegetation types based on Viereck and Elbert (1972) were used as a basis for this analysis.

Vegetation Types Present in the Subunit	Fortymile Subunit	Steese Subunit	Upper Black River Subunit	White Mountains Subunit
Alpine tundra	x	x	x	x
Closed spruce forests	x	x	x	x
Moist tundra	x			
Open, low growing spruce	x	x	x	
Treeless bogs	x	x	x	x

D.2.2. Cultural Modifications

Cultural Modifications are also taken into account in the scenic quality rating process. Cultural modifications can blend in with or stand out from the surrounding landscape. The planning area is still primarily a natural landscape where humans have not substantially changed the scenic quality. However some areas have been modified by the activities of humans. Buildings are the most likely to be seen and have the most modification from the natural landscape. Buildings primarily exist near communities, including Boundary, Central, Chicken, Eagle, Tanacross, Tetlin, Tetlin Junction, and Tok. Homestead areas, mining claims, Native allotments, and isolated cabins can also be found throughout the planning area. Most of the buildings outside a community, are in relative harmony with the landscape as they are small, made of local materials, and have primarily natural based colors.

Other modifications include the Alaska, Dalton, Elliot, Steese, Taylor, and Top of the World highways, and other roads. Airstrips can be found in the Fortymile, Steese, and Upper Black River subunits. While the profile of an airstrip is low, landform changes are introduced by brown colors in predominantly green vegetation and more regular lines than the surrounding irregular vegetation. A few capped oil and gas exploration wells may be found within the Upper Black River Subunit. Given the small footprint and with most either flush with the landscape or consisting of a “Christmas tree” less than six feet tall, these modifications are very hard to see from a distance of more than 200 feet. OHV trails exist in all subunits to varying degrees. Summer travel in the Upper Black River Subunit is primarily by watercraft. However, snowmobile trails and seismic lines can be seen from elevated locations. Summer ATV travel has occurred in the Fortymile, Steese, and White Mountains subunits with many trails or travel routes visible for long distances from elevated locations.

While these features introduce modifications to the landform, they also provide places of use and special interest or key observation areas from which to evaluate the sensitivity levels.

D.3. Visual Sensitivity

Visual sensitivity is a key component in identifying VRI classes. Sensitivity levels are a measure of public concern for the scenic quality of an area. There are six factors to consider when evaluating sensitivity levels: Type of Users, Amount of Use, Public Interest, Adjacent Land Use, Special Areas and Other Factors. Areas identified as sensitive include known travel routes, especially State Scenic Byways, areas of human habitation, areas of traditional use, Native allotments, and areas identified through Benefits Based Management studies (Fix 2007; Harrington and Fix 2008; Stegmann, Fix and Teel 2008). Numerous areas are noted to have potentially high visual sensitivity because area residents and visitors view the natural landscape as very important and have a high level of interest and sensitivity to changes to the natural landscape. There are three levels of overall sensitivity: High (H), Medium (M) and Low (L). The results of the sensitivity ratings are summarized in Table D.1, “Scenic Quality Rating Units, VRI Classes, and Sensitivity Ratings in the Planning Area” .

Table D.1. Scenic Quality Rating Units, VRI Classes, and Sensitivity Ratings in the Planning Area

Scenic Quality Rating Unit (SQRU)	SQRU Class	Visual Sensitivity Rating	Fortymile Subunit	Steese Subunit	Black River Subunit	White Mountains Subunit
Alaska Range-Central and Eastern Part	A	M	X			
Kokrine-Hodzana Highlands	B	M				X
Northern Foothills	A	M	X			
Northway-Tanacross Lowlands	B	M	X			
Ogilvie Mountains	A	M	X		X	
Porcupine Plateau	B	M			X	
Rampart Trough	C	M				X
Tanana-Kuskokwim Lowland	C	L	X			
Tintina Valley	B	L	X			

Scenic Quality Rating Unit (SQRU)	SQRU Class	Visual Sensitivity Rating	Fortymile Subunit	Steese Subunit	Black River Subunit	White Mountains Subunit
Yukon Flats Section	C	M	X	X	X	
Yukon-Tanana Upland	A	M	X	X		X
Visual Resource Inventory Class			**II-III**	**I-II**	**II-III**	**I-II**

D.4. Distance Zones

Distance Zones are also used in determining VRI classes. They are important in assessing visual impacts. The distance from an object affects how clearly elements of a landscape are perceived, with visible details of a particular object decreasing with increasing distance. Distance Zones are one basis for determining the visual sensitivity of planning areas. The VRM system recognizes three Distance Zones: Foreground-Middleground, Background, and Seldom-Seen as defined below:

- Foreground-Middleground Zone: This is the area that can be seen from each travel route or assessment location for a distance of up to five miles where management activities might be viewed in detail.
- Background Zone: This is the remaining area that can be seen from each travel route or assessment location to approximately 15 miles. It does not include areas in the background that are so far distant that the only thing discernible is the form or outline.
- Seldom-Seen Zone: These are areas that are not visible within the Foreground-Middleground and Background zones, and areas beyond the Background Zone, generally over 15 miles and screened by natural landscape features.

D.5. Summary

D.5.1. Fortymile Subunit

The tables below show the results of the VRM Inventory (VRI Class) for the Fortymile Subunit. The first table shows inventory results for all lands in the subunit. The second table displays VRI results for BLM-managed lands. Acreage numbers are based on the 2009 Land Status maps.

Table D.2. VRM Inventory for all lands within the Fortymile Subunit

Inventory Parameters	VRI Class I (acres)	VRI Class II (acres)	VRI Class III (acres)	VRI Class IV (acres)	Percent of Subunit
Scenic Quality Rating (SQRU)					
SQRU A	145,000	12,910,000	0	0	82
SQRU B	0	0	741,000	1,565,000	15
SQRU C	0	0	0	488,000	3
Visual Sensitivity					
High	145,000	11,057,000	0	0	71
Medium	0	1,853,000	741,000	1,011,000	23
Low	0	0	0	1,042,000	6
Distance Class					
Foreground-Middleground	145,000	2,926,000	741,000	488,000	27
Background	0	4,188,000	0	1,034,000	33
Seldom-seen	0	5,797,000	0	530,000	40

Table D.3. VRM Inventory for BLM-managed lands within the Fortymile Subunit

Inventory Parameters	VRI Class I (acres)	VRI Class II (acres)	VRI Class III (acres)	VRI Class IV (acres)	Percent of Subunit
Scenic Quality Rating (SQRU)					
SQRU A	145,000	1,870,000	0	0	97
SQRU B	0	0	6,000	47,000	3
SQRU C	0	0	0	1,000	0
Visual Sensitivity					
High	145,000	1,857,000	0	0	97
Medium	0	13,000	6,000	0	1
Low	0	0	0	47,000	2
Distance Class					
Foreground-Middleground	145,000	655,000	6,000	2,000	39
Background	0	659,000	0	45,000	34
Seldom-seen	0	556,000	0	0	27

The following tables show the relationship between the VRI inventory data and the VRM Class management alternatives. All Acreages for Alternatives A-D are based on 2009 Land Status. Acreages for Alternative E are based on 2015 Land Status.

Table D.4. Fortymile Subunit Alternatives A and B for VRI Classes I and II

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. A	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	145	145			145			145											
VRM Class II	103										103			103			103		
VRM Class III																			
VRM Class IV																			
Total	248	145			145			145			103			103			103		
Alternative. B	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	145	145			145			145											
VRM Class II	631										968			968			437	360	170
VRM Class III	4										3			3			3		
VRM Class IV	1,284										907			894	13		222	298	387
Total	2,076	145			145			145			1,878			1,865	13		663	659	557

[a] All acres are in 1,000s of acres

Table D.5. Fortymile Subunit Alternatives C and D for VRI Classes I and II

		VRI Class I									VRI Class II								
		Scenic Quality Rating			**Sensitivity Rating**			**Distance Zones**			**Scenic Quality Rating**			**Sensitivity Rating**			**Distance Zones**		
Alternative. C	Acres[a]- (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	145	145			145			145											
VRM Class II	452										452			452			124	212	115
VRM Class III																			
VRM Class IV	1,831										1,426			1,413	13		538	447	442
Total	2,076	145			145			145			1,878			1,865	13		663	659	557
Alternative. D	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	145	145			145			145											
VRM Class II	103,000																		
VRM Class III											100			100			100		
VRM Class IV											1,778			1,765	13		562	659	557
Total		145			145			145			1,878			1,864	13		662	659	557

[a]All acres are in 1,000s of acres

Table D.6. Fortymile Subunit Alternatives A and B for VRI Classes III and IV

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. A	Acres a(1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	145																		
VRM Class II	103																		
VRM Class III																			
VRM Class IV																			
Total	248																		
Alternative. B	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	145																		
VRM Class II	970											3				3		3	
VRM Class III	4											838				1	1		

		VRI Class III									**VRI Class IV**								
		Scenic Quality Rating			**Sensitivity Rating**			**Distance Zones**			**Scenic Quality Rating**			**Sensitivity Rating**			**Distance Zones**		
VRM Class IV	957		6			6		6				43	<1			44	1	42	<1
Total	2,076		6			6		6				47	<1			47	2	45	<1

[a]All acres are in 1,000s of acres

Table D.7. Fortymile Subunit Alternatives C and D for VRI Classes III and IV

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. C	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	145																		
VRM Class II	100																		
VRM Class III																			
VRM Class IV	1,831		6			6		6				47	<1			47	2	45	<1
Total	2,076		6			6		6				47	<1			47	2	45	<1
Alternative. D	Acres	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	145																		
VRM Class II																			
VRM Class III	100																		

		VRI Class III									**VRI Class IV**								
		Scenic Quality Rating			**Sensitivity Rating**			**Distance Zones**			**Scenic Quality Rating**			**Sensitivity Rating**			**Distance Zones**		
VRM Class IV	1,831		6			6		6				47	<1			47	2	45	<1
Total	2,076		6			6		6				47	<1			47	2	45	<1

[a]All acres are in 1,000s of acres

Table D.8. Fortymile Subunit Alternatives E for VRI Classes I – IV

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. E	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	145	144			144			144			<1			<1			<1		
VRM Class II	731	<1			<1			<1			728			728			236	300	192
VRM Class III	11										11			11			11		
VRM Class IV	992	<1			<1			<1			942			928	13		292	296	354
Total	1,878	145			145			145			1,681			1,667	13		539	596	546

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. E	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	144																		
VRM Class II	731											3				3		2	<1
VRM Class III	11																		

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
VRM Class IV	992		6			6		6				43				44	2	42	<1
Total	1,878		6			6		6				46				47	2	44	<1

[a]All acres are in 1,000s of acres

D.5.2. Steese Subunit

The tables below show the results of the VRM Inventory (VRI Class) for the Steese Subunit. The first table shows inventory results for all lands in the subunit. The second table displays VRI results for only BLM-managed lands. Acreage numbers are based on the 2009 Land Status maps.

Table D.9. VRM Inventory for all lands within the Steese Subunit

Inventory Parameters	VRI Class I (acres)	VRI Class II (acres)	VRI Class III (acres)	VRI Class IV (acres)	Percent of Subunit
Scenic Quality Rating (SQRU)					
SQRU A	58,000	1,963,000	0	0	48
SQRU B	0	0	1,000	20,000	1
SQRU C	11,000	0	25,000	2,122,000	51
Visual Sensitivity					
High	58,000	1,960,000	25,000	1,000	49
Medium	11,000	3,000	1,000	2,121,000	51
Low	0	0	0	20,000	0
Distance Class					
Foreground-Middleground	69,000	830,000	26,000	1,456,000	57
Background	0	955,000	0	596,000	37
Seldom-seen	0	178,000	0	90,000	6

Table D.10. VRM Inventory for BLM-managed lands within the Steese Subunit

Inventory Parameters	VRI Class I (acres)	VRI Class II (acres)	VRI Class III (acres)	VRI Class IV (acres)	Percent of Subunit
Scenic Quality Rating (SQRU)					
SQRU A	58,000	1,136,000	0	0	94
SQRU B	0	0	0	0	0
SQRU C	11,000	0	25,000	45,000	6
Visual Sensitivity					
High	58,000	1,136,000	25,000	1,000	96
Medium	11,000	0	0	44,000	4
Low	0	0	0	0	0
Distance Class					
Foreground-Middleground	69,000	408,000	25,000	43,000	43
Background	0	644,000	0	2,000	51
Seldom-seen	0	84,000	0	0	6

The tables below show the relationship between the inventory data and management alternatives. All Acreages for Alternatives A-D are based on 2009 Land Status. Acreages for Alternative E are based on 2015 Land Status.

Table D.11. Steese Subunit Alternatives A and B for VRI Classes I and II

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. A	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	69	57		11	57	11		69			<1			<1			<1		
VRM Class II	76										76			76			30	46	
VRM Class III	1,066	<1			<1			<1			1,056			1,056			373	598	84
VRM Class IV																			
Total	1,211,000	58		11	58	11		69			1,132			1,132			404	644	84
Alternative. B	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	107	58		15	58	15		73			21			21			21	<1	
VRM Class II	1,139										1,130			1,130			401	645	84
VRM Class III																			
VRM Class IV	35										2			2			2		
Total	1,292	58		15	58	15		73			1,153			1,153			424	645	84

[a] All acres are in 1,000s of acres

Table D.12. Steese Subunit Alternatives C and D for VRI Classes I and II

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. C	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	103	58		15	58	15		73			17			17			17	<1	
VRM Class II	578										569			569			166	363	40
VRM Class III																	38	116	
VRM Class IV	612										568			568			242	282	44
Total	1,292	58		15	58	15		73			1,153			1,153			462	761	84
Alternative. D	Acres (1,000,s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	90	58		15	58	15		73			5			5			4	<1	
VRM Class II	423										423			423			127	257	
VRM Class III																			40
VRM Class IV	779										725			725			293	388	44
Total	1,292	58		15	58	15		73			1,153			1,153			424	645	84

[a] All acres are in 1,000s of acres

Table D.13. Steese Subunit Alternatives A and B for VRI Classes III and IV

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. A	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	69			<1	<1			<1					<1		<1		<1		
VRM Class II	76																		
VRM Class III	1,066			8	8			8					1	1				1	
VRM Class IV																			
Total	1,211			8	8			8					1	1	<1		<1	1	
Alternative. B	Acres (1,000,s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	107			12	12			12											
VRM Class II				8	8			8					1	1				1	
VRM Class III																			

VRI Class III											VRI Class IV								
		Scenic Quality Rating			**Sensitivity Rating**			**Distance Zones**			**Scenic Quality Rating**			**Sensitivity Rating**			**Distance Zones**		
VRM Class IV	35												44		44		43	<1	
Total	1,281			20	20			20					45	1	44		43	2	

[a]All acres are in 1,000s of acres

Table D.14. Steese Subunit Alternatives C and D for VRI Classes III and IV

VRI Class III											VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. C	Acres[a] (1,000,s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	103			12	12			12					<1		<1		<1		
VRM Class II	578			8	8			8					1	1				1	
VRM Class III	154																		
VRM Class IV	612												44		44		43	<1	
Total	1,292			20	20			20					45	1	44		43	2	
Alternative. D	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	90			12	12			12											
VRM Class II	423																		
VRM Class III																			

VRI Class III										VRI Class IV									
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
VRM Class IV	779			8	8			8					45	1	44		43	2	
Total	1,292			20	20			20					45	1	44		43	2	

[a]All acres are in 1,000s of acres

Table D.15. Steese Subunit Alternatives E for VRI Classes I – IV

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. D	Acres[a] (1,000,s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	103	58		11	58	11		69			17			17			17	<1	
VRM Class II	910	<1			<1			<1			900			900			212	604	84
VRM Class III																			
VRM Class IV	270	<1			<1			<1			236			236			195	41	<1
Total	1,282	58		11	58	11		69			1,154			1,154			424	645	84

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. D	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	103			17	17			17											
VRM Class II	910			8	8			8					1	1				1	
VRM Class III																			

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
VRM Class IV	270												34		34		34	<1	
Total	1,282			25	25			25					35	1	34		34	2	

[a]All acres are in 1,000s of acres

D.5.3. Upper Black River Subunit

The tables below show the results of the VRM Inventory (VRI Class) for the Upper Black River Subunit. The first table shows inventory results for all lands in the subunit. The second table displays VRI results for only BLM-managed lands. Acreage numbers are based on the 2009 Land Status maps.

Table D.16. VRM Inventory for all lands within the Upper Black River Subunit

Inventory Parameters	VRI Class I (acres)	VRI Class II (acres)	VRI Class III (acres)	VRI Class IV (acres)	Percent of Subunit
Scenic Quality Rating (SQRU)					
SQRU A	0	2,884,000	0	0	37
SQRU B	0	0	1,262,000	1,739,000	39
SQRU C	0	0	0	1,873,000	24
Visual Sensitivity					
High	0	10,000	0	0	0
Medium	0	2,874,000	1,262,000	3,452,000	98
Low	0	0	0	161,000	2
Distance Class					
Foreground-Middleground	0	1,512,000	1,262,000	1,199,000	51
Background	0	1,102,000	0	1,743,000	37
Seldom-seen	0	270,000	0	671,000	12

Table D.17. VRM Inventory for BLM-managed lands within the Upper Black River Subunit

Inventory Parameters	VRI Class I (acres)	VRI Class II (acres)	VRI Class III (acres)	VRI Class IV (acres)	Percent of Subunit
Scenic Quality Rating (SQRU)					
SQRU A	0	1,478,000	0	0	63
SQRU B	0	0	448,000	398,000	36
SQRU C	0	0	0	37,000	1
Visual Sensitivity					
High	0	0	0	0	0
Medium	0	1,478,000	448,000	435,000	100
Low	0	0	0	0	0
Distance Class					
Foreground-Middleground	0	783,000	448,000	16,000	53
Background	0	637,000	0	408,000	44
Seldom-seen	0	58,000	0	11,000	3

The tables below show the relationship between the inventory data and management alternatives. All Acreages for Alternatives A-D are based on the 2009 Land Status maps. Acreages for Alternative E are based on 2015 Land Status.

Table D.18. Upper Black River Subunit Alternatives A and B for VRI Classes I and II

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. A	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II																			
VRM Class III																			
VRM Class IV																			
Total																			
Alternative. B	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II	2,361										1,478				1,478		783	637	58
VRM Class III																			
VRM Class IV	1,738																		
Total	2,359										1,478				1,478		783	637	58

[a] All acres are in 1,000s of acres

Table D.19. Upper Black River Subunit Alternatives C and D for VRI Classes I and II

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. C	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II																			
VRM Class III	623										549				549		275	216	58
VRM Class IV	1,738										929				929		507	422	
Total	2,361										1,478				1,478		783	637	58
Alternative. D	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II																			
VRM Class III																			
VRM Class IV	2,361										1,478				1,478		782	637	58
Total	2,361										1,478				1,478		782	637	58

[a] All acres are in 1,000s of acres

Table D.20. Upper Black River Subunit Alternatives A and B for VRI Classes III and IV

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. A	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II																			
VRM Class III																			
VRM Class IV																			
Total																			
Alternative. B	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II	2,361		448			448		448				398	37		435		16	408	11
VRM Class III																			

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
VRM Class IV																			
Total	2,361		448			448		448				398	37		435		16	408	11

[a]All acres are in 1,000s of acres

Table D.21. Upper Black River Subunit Alternatives C and D for VRI Classes III and IV

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. C	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II			51			51		51				22			23			12	11
VRM Class III	623																		
VRM Class IV	1,738		397			397		397				375	37		413		16	397	<1
Total	2,361		448			448		448				398	37		435		16	408	11
Alternative. D	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II																			
VRM Class III																			

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
VRM Class IV	2,361		448			448		448				398	37		435		16	408	11
Total	1,281		447			447		447				398	37		435		16	408	11

[a]All acres are in 1,000s of acres

Table D.22. Upper Black River Subunit Alternatives E for VRI Classes I – IV

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. E	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II	1,131										803				803		465	280	58
VRM Class III																			
VRM Class IV	1,230										674				674		317	357	
Total	2,360										1,477				1,477		783	637	58

		VRI Class III									VRI Class IV								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. E	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I																			
VRM Class II	1,131		236			236		236				92			92			81	11
VRM Class III																			

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
VRM Class IV	1,230		212			212		212				306	37		343		16	327	<1
Total	2,360		448			448		448				398	37		435		16	408	11

[a] All acres are in 1,000s of acres

D.5.4. White Mountains Subunit

The tables below show the results of the VRM Inventory (VRI Class) for the White Mountains Subunit. The first table shows inventory results for all lands in the subunit. The second table displays VRI Class results for only BLM-managed lands. Acreage numbers are based on the 2009 Land Status maps.

Table D.23. VRM Inventory for all lands within the White Mountains Subunit

Inventory Parameters	VRI Class I (acres)	VRI Class II (acres)	VRI Class III (acres)	VRI Class IV (acres)	Percent of Subunit
Scenic Quality Rating (SQRU)					
SQRU A	73,000	1,790,000	0	0	59
SQRU B	0	0	69,000	53,000	4
SQRU C	4,000	0	0	1,159,000	37
Visual Sensitivity					
High	73,000	1,790,000	0	0	59
Medium	4,000	0	69,000	1,211,000	41
Low	0	0	0	0	0
Distance Class					
Foreground-Middleground	76,000	1,177,000	69,000	453,000	57
Background	0	482,000	0	657,000	36
Seldom-seen	0	131,000	0	101,000	7

Table D.24. VRM Inventory for BLM-managed lands within the White Mountains Subunit

Inventory Parameters	VRI Class I (acres)	VRI Class II (acres)	VRI Class III (acres)	VRI Class IV (acres)	Percent of Subunit
Scenic Quality Rating (SQRU)					
SQRU A	70,000	950,000	0	0	100
SQRU B	0	0	0	0	0
SQRU C	0	0	0	0	0
Visual Sensitivity					
High	70,000	950,000	0	0	100
Medium	0	0	0	0	0
Low	0	0	0	0	0
Distance Class					
Foreground-Middleground	70,000	786,000	0	0	84
Background	0	164,000	0	0	16
Seldom-seen	0	0	0	0	0

The tables below show the relationship between the inventory data and management alternatives. All Acreages for Alternatives A-D are based on 2009 Land Status. Acreages for Alternative E are based on 2015 Land Status.

Table D.25. White Mountains Subunit Alternatives A and B for VRI Classes I and II

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. A	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	69	69			69			69			<1			<1			<1		
VRM Class II	506	1			1			1			505			505			388	117	
VRM Class III	428	<1			<1			<1			428			428			382	46	
VRM Class IV																			
Total	1,003	71			71			71			933			933			769	164	
Alternative. B	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	96	70			70			70			25			25			25		
VRM Class II	554										554			554			397	157	
VRM Class III	38										367			367			361	7	
VRM Class IV	4										4			4			4	<1	
Total	1,020	70			70			70			950			950			786	164	

[a] All acres are in 1,000s of acres

Table D.26. White Mountains Subunit Alternatives C and D for VRI Classes I and II

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. C	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	96	70			70			70			25			25			25		
VRM Class II	217										217			217			130	87	
VRM Class III	268										268			268			237	30	
VRM Class IV	440										440			440			394	47	
Total	1,020	70			70			70			950			950			786	164	
Alternative. D	Acres (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	82	70			70			70			12			12			12		
VRM Class II	123										123			123			70	53	
VRM Class III	321										321			321			265	56	
VRM Class IV	494										494			494			440	54	
Total	1,020	70			70			70			950			950			786	164	

[a] All acres are in 1,000s of acres

Table D.27. White Mountains Subunit Alternatives E for VRI Classes I – II

		VRI Class I									VRI Class II								
		Scenic Quality Rating			Sensitivity Rating			Distance Zones			Scenic Quality Rating			Sensitivity Rating			Distance Zones		
Alternative. E	Acres[a] (1,000s)	A	B	C	High	Medium	Low	F-M	B	SS	A	B	C	High	Medium	Low	F-M	B	SS
VRM Class I	96	70			70			70			25			25			25		
VRM Class II	883	<1			<1			<1			882			882			719	164	
VRM Class III																			
VRM Class IV	42										42			42			42	<1	
Total	1,020	71			71			71			950			950			786	164	

[a]All acres are in 1,000s of acres

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Appendix E

Wild and Scenic Rivers Inventory

Appendix E. Wild and Scenic Rivers Inventory

Through the Wild and Scenic Rivers Act (WSR Act) of 1968, Congress established legislation to protect and preserve designated rivers throughout the United States in their free-flowing condition. Section 5(d) of the WSR Act directs federal agencies to consider the potential for national "wild," "scenic," and "recreational" river areas during land use planning. A Wild and Scenic River inventory was therefore conducted by the Eastern Interior Field Office as part of the Eastern Interior planning process. Only Congress can designate new wild and scenic rivers in Alaska.

This appendix outlines the process used to determine which rivers in the Eastern Interior Planning Area meet the eligibility and suitability criteria under the WSR Act. Rivers determined eligible are described in this appendix and in Chapter 3 of the Proposed RMP/Final EIS. Rivers meeting the suitability criteria are recommended suitable for designation under the WSR Act in Alternative B of the Proposed RMP/Final EIS. The BLM is required to analyze the impacts of designation and of suitable rivers in at least one alternative.

Guidance on determining eligibility and suitability for wild and scenic rivers (WSRs) comes from:

- The Wild and Scenic Rivers Act of 1968 (Public Law 90-542 [as amended], 16 U.S.C. 1271–1287
- BLM Manual 6400, Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, Planning and Management
- The Interagency Wild and Scenic Rivers Council: Composed of representatives from the U.S. Department of the Interior and the Department of Agriculture, the overriding goal of the Council is to improve interagency coordination in administering the WSR Act, improve service to the American public, and enhancing protection of important river resources. Information about the council and its products can be found at http://www.rivers.gov/

All rivers in Alaska were considered for inclusion in the National Wild and Scenic Rivers System (NWSR) as part of the Alaska National Interest Lands Conservation Act (ANILCA). In the *Report to the Secretary of the Interior for Potential Components of the National Wild and Scenic Rivers System, Alaska* (Bureau of Outdoor Recreation 1972), Alaska was divided into six drainage sub-regions with 69 rivers selected for preliminary consideration for having the greatest potential for inclusion. The planning area is in the Yukon sub-region and 26 rivers were identified for study. Of these 26 rivers, 11 are within the planning area. These rivers are Beaver, Birch, Black-Grayling-Salmon, Charley, Chatanika, Chena, Fortymile, Kandik, Porcupine, Tanana, and Yukon. Additionally, three of these rivers were previously identified for potential inclusion in the NWSR (FR 1970). They include Birch Creek, Chatanika River, and the Fortymile River. Birch Creek, Fortymile River, and Beaver Creek were designated as wild and scenic rivers (WSRs) in 1980 by ANILCA.

E.1. Overview of the Process

There are three phases in identifying rivers for possible inclusion in the NWSR.

The first phase of the wild and scenic river review is to inventory all potentially eligible rivers within the planning area to determine which rivers are eligible for consideration in the NWSR. To be eligible, rivers must be free-flowing and possess at least one outstandingly remarkable value

(ORV). Free-flowing is defined as existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. ORVs may include scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. The ORVs are evaluated in the context of regional and/or national significance, and must be river-related. Eligibility is, in legal terms, a fact-based determination and not a planning decision.

The second phase is to assign a tentative classification of “wild,” “scenic,” or “recreational” for each river/segment found eligible. It is made based on the current level of naturalness and development associated with each river/segment. Congress will set the actual classification on any river added to the NWSR.

The third phase is to determine suitability for inclusion into the NWSR. Determining suitability is a planning decision and it provides the basis for recommending legislation.

Methodology

The first step in determining eligibility is to develop a list of potential rivers. A list of potential rivers was generated for the planning area that included or was based on review of:

1. recommendations from the public made during the scoping process;
2. the 1970 USDA/DOI List;
3. the Nationwide Rivers Inventory List;
4. the Outstanding Rivers List compiled by American Rivers, Inc.;
5. published guidebooks, regional guides, and inventories, i.e., American Whitewater Affiliation List;
6. river segments identified in Statewide Comprehensive Outdoor Recreation Plans;
7. river segments officially identified by State or local government agencies as being in the public interest for river protection;
8. rivers identified as potentially meeting the criteria by the BLM review team; and,
9. other sources such as website searches.

The review was limited to rivers that the BLM administers per BLM Manual 6400–3.1: “The BLM does not have the authority to evaluate the presence, absence, or quality of values that occur on private lands. However, the boundary of that river may include private lands. In such cases, eligibility determinations should only consider the presence or values on BLM-administered lands and related waters.” The data from the list of potential river segments were then transferred to a GIS database with segments either extended to landmarks or confluences on the ground. Some segments were connected to the existing river corridors for easier management consideration or were extended to headwaters to protect downstream values.

The second step in determining eligibility is determining ORVs for each identified river. The Wild and Scenic Rivers Act states that ORVs can include scenery, recreation, geology, fish and wildlife, history, cultural and other similar values. More specific guidance on identifying ORVs is provided by the Interagency Wild and Scenic Rivers Council (IWSRC) and BLM Manual 6400.

The following is a summary of the guidance by the IWSRC in “A Compendium of Questions & Answers Relating to Wild & Scenic Rivers,” May, 1997 online at www.rivers.gov. The value must be river related. To be considered river related, a value must:

- be located in the river or on its immediate shorelines – within one-quarter mile on either side of the river; and,
- contribute substantially to the functioning of the river ecosystem; or,
- owe its location or existence to the presence of the river.

The value must be rare, unique, or exemplary in a regional or national context. To be considered rare or unique, a value should be a conspicuous example from among a number of similar values that are themselves uncommon or extraordinary.

Since the determination of a river's eligibility is a review of what exists, the eligibility of rivers does not vary with the plan alternatives. It is simply a declaration of what has been determined.

Section 1(b) of the WSR Act requires that, in order for a river segment to be eligible for inclusion as a component of the NWSR, it must possess one or more of the following ORVs: scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. The following standards guide how these values are to be interpreted and applied on BLM-managed lands. State Directors may (normally as an element of guidance for resource management planning) prescribe supplemental standards or criteria for determining ORVs as they apply to particular river segments. BLM Manual 6400 provides standards to guide how ORVs are interpreted and applied. These are described below.

1. **Scenery.** The landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features and/or attractions. BLM Visual Resource Inventory Handbook, H-8410-1, may be used in assessing visual quality and in evaluating the extent of development upon scenic values. The rating area must be scenic quality "A" as defined in BLM Visual Resource Inventory Handbook. When analyzing scenic values, additional factors, such as seasonal variations in vegetation, scale of cultural modifications, and length of time negative intrusions are viewed, may be considered. Scenery and visual attractions may be highly diverse along the majority of the river or river segment.
2. **Recreation.** Recreational opportunities within the subject river corridor are, or have the potential to be, popular enough to attract visitors from throughout or beyond the region of comparison or are unique or rare within the region. River-related opportunities include, but not be limited to, sightseeing, interpretation, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. Such a recreational opportunity may be an outstandingly remarkable value without the underlying recreational resource being an outstandingly remarkable value (e.g., fishing may be an outstandingly remarkable value without the fish species being an outstandingly remarkable value). The river may provide settings for national or regional usage or competitive events.
3. **Geology.** The river area contains one or more examples of a geologic feature, process, or phenomenon that is unique or rare within the region of comparison. The feature(s) may be in an unusually active stage of development, represent a "textbook" example, and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial, and other geologic features).
4. **Fish.** Fish values include either indigenous fish populations or habitat or a combination of these river-related conditions.
    a. Populations. The river is nationally or regionally an important producers of indigenous resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or federal or state, listed, or candidate, threatened, endangered, or BLM sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination that it is an outstandingly remarkable value.
    b. Habitat. The river provides exceptionally high quality habitat for fish species indigenous to the region of comparison. Of particular significance is habitat for wild stocks and/or federal or state listed or candidate, threatened, endangered, or BLM sensitive species. Diversity of habitat is an important consideration and could, in itself, lead to a determination that it is an outstandingly remarkable value.

5. **Wildlife.** Wildlife values include either terrestrial or aquatic wildlife populations or habitat or a combination of these river-related conditions.
   a. Populations. The river, or area within the river corridor, contains nationally or regionally important populations of indigenous wildlife species dependent on the river environment. Of particular significance are species considered to be unique to the area and/or populations of federal or state listed or candidate, threatened, endangered, or BLM sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination that it is an outstandingly remarkable value.
   b. Habitat. The river, or area within the river corridor, provides exceptionally high-quality habitat for wildlife of national or regional significance and/or may provide unique habitat or a critical link in habitat conditions for federal or state listed or candidate, threatened, endangered, or BLM sensitive species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitat is an important consideration and could, in itself, lead to a determination that it is an outstandingly remarkable value.
6. **Historical.** The river, or area within the corridor, has scientific value or contains a rare or outstanding example of a district, site, building, or structure that is associated with an event, person, or distinctive style. Likely candidates include sites that are eligible for the National Register of Historic Places at the national level or have been designated a national historic landmark by the Secretary of the Interior.
7. **Cultural.** The river, or area within the river corridor, contains rare or outstanding examples of historic or prehistoric locations of human activity, occupation, or use, including locations of traditional cultural or religious importance to specified social and/or cultural groups. Likely candidates might include a unique plant procurement site of contemporary significance.
8. **Other Similar Values.** While no specific national evaluation guidelines have been developed for the "other similar values" category, assessments of additional river-related values consistent with the foregoing guidance may be developed as part of the eligibility process, including, but not limited to, hydrological and paleontological resources or scientific study opportunities. By way of example, the following evaluation guidelines describe possible river-related botanical resources:

   i. *Botany* The area within the river corridor contains riparian communities that are ranked critically imperiled by state-based natural heritage programs. Alternatively, the river contains exemplary examples, in terms of health, resilience, species diversity, and age diversity, of more common riparian communities. The river corridor may also contain exemplary and rare types of ecological refugia (palm oases) or vegetation habitats (hanging gardens or rare soil types) that support river related species. The river may also contain river-related plant species that are listed as threatened or endangered by the U.S. Fish and Wildlife Service or appear on the BLM's sensitive species list.

E.1.1. Determining Eligibility

The region of comparison used for determining eligibility was generally the eastern Interior Alaska consisting of the Yukon and Tanana drainages, from the U.S.-Canada border to the confluence of the Tanana River with the Yukon River, between the Alaska Range and Brooks Range. This region was only a general guideline. A BLM resource specialist could determine that based on the resource under consideration, it may be more appropriate to modify the region of consideration. For example, a particular fish may only live in one small area of the region of comparison, making it unique to the region. But if these fish are abundant in the area immediately adjacent to the region, it may be more appropriate to use a larger area for consideration. Likewise, a particular fish species may be present in several locations in the planning area, but only exist in the planning area, so it may be appropriate to consider a larger region of comparison.

List of Potential Rivers to be Evaluated

1. Two comments were received on WSRs in the scoping process for the Eastern Interior RMP. One encouraged the BLM to consider designation of WSRs as a tool to help wildlife populations, but did not recommend any particular river segment. The second recommended that the Salmon Fork of the Black River be considered for designation as a WSR.
2. On October 28, 1970, the Secretaries of Agriculture and the Interior identified and published in the *Federal Register* a list of 47 river segments for Wild and Scenic river evaluation and consideration (FR 1970). Of the 47 identified rivers, six are in Alaska. They include the following three rivers in the planning area: Birch Creek, Chatanika River, and Fortymile River. Birch Creek and the Fortymile River were designated as components of the NWSR in 1980 under ANILCA. The BLM has no management authority on the Chatanika River.
3. The Nationwide Rivers Inventory listed four rivers within the planning area. These rivers were placed on the list by the National Park Service (NPS) in 1993 because they were thought to potentially contain one or more ORVs, though no formal determination of eligibility was conducted. The NPS only reviewed the segments of these rivers that are within the Yukon-Charley Rivers National Preserve.
    a. The Kandik River from the Yukon-Charley Rivers National Preserve boundary to the river mouth (32 river miles) was listed in 1993 as possibly being eligible as “wild” with outstanding fish, history, and biological diversity values. North of the Preserve boundary, Doyon, Limited, manages 16 miles of the Kandik River, the State of Alaska manages the next 12 miles, and the BLM manages the remaining 25 miles to the Canadian border.
    b. The Nation River from the Yukon-Charley Rivers National Preserve boundary to river mouth (16 river miles) was listed in 1993 as possibly being eligible as “wild” with outstanding fish and wildlife values. The BLM does not manage any lands on the Nation River.
    c. The Seventymile River from headwaters to the Yukon-Charley Rivers National Preserve boundary (20 river miles) was listed in 1993 as possibly being eligible as “wild” with outstanding geology, wildlife, and archaeological sites. Downstream from the preserve boundary, the lands surrounding the river are not managed by the BLM. (A Decision to Issue Conveyance on the section immediately downstream from the preserve boundary was issued on March 17, 2009.)
    d. The Yukon River from upstream of the Yukon-Charley Rivers National Preserve boundary near Calico Bluffs to downstream of Yukon-Charley Rivers National Preserve boundary near Circle (128 river miles) was listed in 1993 possibly being eligible for classification as “wild” and “scenic” with outstanding geology, wildlife, and history values. The BLM does not manage any lands on the Yukon River in the planning area.
4. *The American Rivers Outstanding Rivers List (Huntington and Echeverria 1991):* Eight rivers on the list are within the planning area. Of these, five contain no lands for which the BLM has management responsibilities (Charley, Chatanika, Chena, Porcupine and Yukon rivers). The three rivers on the list for which the BLM does have management authority (Birch, Beaver and the Fortymile) were designated as components of the NWSR in 1980 under ANILCA.

5. Published guidebooks, regional guides, and inventories. A review of published guidebooks found the following: *The Alaska River Guide* by Karen Jettmar (1993). This book contains information on the following rivers in the planning area: Beaver Creek, Birch Creek, Black River, Charley River, Chatanika River, Chena River, Fortymile River, and Porcupine River. The *American Whitewater National Whitewater Inventory* includes the following rivers in the planning area: Charley River and Fortymile River.
6. A review of *Alaska's Outdoor Legacy; Statewide Comprehensive Outdoor Recreation Plan* 2004–2009 (ADNR 2004) found that the State of Alaska has six legislatively designated State Recreation Rivers, none of which are in the planning area.
7. River segments officially identified by State or local government agencies as being in the public interest for river protection. None were identified.
8. Rivers identified as potentially meeting the criteria by a BLM review team. On January 14, 2009 BLM staff specialists reviewed USGS 1:250,000 quadrangle maps covering the planning area and developed a list of rivers that potentially met the eligibility criteria of free-flowing and possessing at least one Outstandingly Remarkable Value. Thirty-seven rivers were identified as having potential for Outstandingly Remarkable Values.
9. Other resources: A website search was conducted for rivers in the planning area. The American Rivers America's Most Endangered Rivers Report 2009 Edition (online at http://www.americanrivers.org/our-work/protecting-rivers/endangered-rivers/) listed Beaver Creek as the eighth most endangered river in the nation.

From the sources listed above, the BLM compiled a list of 40 rivers (Table E.1, "List of Potential Rivers in the Planning Area"). Rivers already designated as components of the NWSR (e.g., Birch Creek) were excluded from the list. Of the 40 rivers, five are not under BLM management and were removed from further consideration. The remaining 35 rivers were evaluated for eligibility (Table E.2, "Summary Eligibility Findings for Inclusion into the NWSR").

One additional river, the Wood River was identified during the public comment period on the Draft RMP/EIS. This river was added to the list and evaluated for the Proposed RMP/Final EIS.

Table E.1. List of Potential Rivers in the Planning Area

River	Subunit	Presence of BLM Lands
Bachelor Creek	Steese	Yes
Bear Creek	Steese	Yes
Big Windy Creek	Steese	Yes
Black River	Upper Black River	Yes
Chatanika	Fortymile	No
Chena River	Fortymile	No
Clums Fork	Steese	Yes
Dexter Creek	Steese	Yes
Dome Creek	Fortymile	Yes
Drifting Snow Creek	Upper Black River	Yes
Fossil Creek	White Mountains	Yes
Gold Run	Fortymile	Yes
Grayling Fork of the Black River plus tributaries	Upper Black River	Yes
Kandik River	Upper Black River	Yes
Little Black River	Upper Black River	Yes
Little Champion Creek	White Mountains	Yes
Little Champion Creek	Fortymile	Yes
Loper Creek	Steese	Yes

River	Subunit	Presence of BLM Lands
McKinley Creek	Steese	Yes
McLean Creek	Steese	Yes
Nation River	Upper Black River	No
Nome Creek	White Mountains	Yes
O'Brien Creek	White Mountains	Yes
Ophir Creek	White Mountains	Yes
Preacher Creek	Steese	Yes
Racquet Creek	Upper Black River	Yes
Rice Gulch Creek and tributary	Upper Black River	Yes
Roy Creek	White Mountains	Yes
Runt Creek and tributaries	Upper Black River	Yes
Salmon Fork of the Black River	Upper Black River	Yes
Seventymile	Fortymile	No
Sheep Creek	White Mountains	Yes
South Fork Birch Creek and two tributaries	Steese	Yes
Tikan Creek	Upper Black River	Yes
Victoria Creek	White Mountains	Yes
Volcano 2 Creek	Steese	Yes
Volcano Creek	Steese	Yes
Willow Creek	White Mountains	Yes
Windy Creek	White Mountains	Yes
Yukon River	Upper Black River	No
Wood River[a]	Upper Black River	Yes

[a] Added and evaluated based on public comments on the Draft RMP/EIS.

The 36 rivers listed in Table E.2, “Summary Eligibility Findings for Inclusion into the NWSR” were reviewed for eligibility using the criteria described below. Resources that ranked a 3 or 4 were considered to meet the criteria of an ORV. All rivers that are free-flowing and possess at least one ORV were considered eligible. Because of past extensive gold dredging operations, Nome Creek was determined not to be free-flowing and thus, potential ORVs were not evaluated.

Each river’s resources were rated by BLM specialists based on a five point scale:

0 – not present / not significant
1 – low value / not significant
2 – moderate value; typical, one of many in the region / locally significant
3 – exemplary value; one of only a few in the region / regionally significant
4 – extraordinary value; the most significant in the region / regionally significant
U – unknown value / little or no knowledge of resource values.

The following BLM resource specialists completed the eligibility review:

- Holli McClain: Outdoor Recreation Planner
- Collin Cogley: Outdoor Recreation Planner
- Robin Mills: Archaeologist
- Jason Post: Fisheries Biologist
- Jim Herriges: Wildlife Biologist
- Craig McCaa: Writer/Editor, Geologist

Summary of Eligibility Findings

Of the 35 rivers reviewed, five were determined to be eligible for inclusion into the NWSR by virtue of being free-flowing and possessing at least one ORV (ranking of 3 or 4): Dome Creek (Fortymile Subunit), Gold Run (Fortymile Subunit), Big Windy Creek (Steese Subunit), Salmon Fork of the Black River (Upper Black River Subunit), and Fossil Creek (White Mountains Subunit). Discussion of how the ORVs for each eligible river were determined are described in section E.1.1.

Table E.2. Summary Eligibility Findings for Inclusion into the NWSR

River	Free-flowing	Potential Outstandingly Remarkable Value							Miles
		Scenic	Recreational	Geologic	Fish	Wildlife	Cultural	Historic	
FORTYMILE SUBUNIT									
Dome Creek	Yes	1	2	U	1	1	U	3	5[a]
Gold Run	Yes	1	U	U	U	1	U	3	4
Little Champion	Yes	U	U	U	U	1	U	2	7
STEESE SUBUNIT									
Bachelor Creek	Yes	1	1	1	U	1	U	1	4
Bear Creek	Yes	U	U	1	U	1	U	1	8
Big Windy Creek	Yes	3	2	3	1	3	U	U	14
Clums Fork	Yes	1	1	U	2	1	2	2	22
Dexter Creek	Yes	U	U	U	U	1	U	1	9
Loper Creek	Yes	1	2	1	U	1	U	2	22
McKinley Creek	Yes	U	U	U	U	1	U	1	10
McLean Creek	Yes	U	U	U	U	1	U	2	4
Preacher Creek	Yes	1	2	2	2	1	2	1	31
South Fork Birch Creek and 2 tributaries	Yes	2	U	2	1	2	U	1	15
Volcano 2 Creek	Yes	U	U	U	U	1	U	1	5
Volcano Creek	Yes	1	U	1	U	1	U	2	5
UPPER BLACK RIVER SUBUNIT									
Black River	Yes	1	U	U	2	1	U	U	59[b]
Drifting Snow Creek	Yes	U	U	U	1	1	U	2	18
Grayling Fork— Black River and tributaries	Yes	1	U	U	2	2	2	U	87
Kandik	Yes	U	2	U	2	1	U	2	25[c]
Little Black River	Yes	1	2	U	1	2	2	U	
Racquet Creek	Yes	U	U	U	U	1	U	2	11
Rice Gulch Creek and tributaries	Yes	U	U	U	1	1	1	2	16
Runt Creek and tributaries	Yes	U	U	U	2	1	2	2	61
Salmon Fork — Black River	Yes	2	2	U	2	3	2	2	52[d]
Tikan Creek	Yes	U	U	U	U	1	U	U	6
Wood River	No	U	U	U	U	U	U	U	54
WHITE MOUNTAINS SUBUNIT									

River	Free-flowing	Potential Outstandingly Remarkable Value							Miles
		Scenic	Recreational	Geologic	Fish	Wildlife	Cultural	Historic	
Fossil Creek	Yes	3	1	3	U	2	U	1	23
Champion Creek	Yes	1	1	2	U	2	1	1	8
Nome Creek	No	—	—	—	—	—	—	—	25
O'Brien Creek	Yes	2	1	U	U	2	U	1	11
Ophir Creek	Yes	1	0	1	U	1	U	2	17
Roy Creek	Yes	1	0	U	U	1	U	1	10
Sheep Creek	Yes	2	0	U	U	1	U	U	10
Victoria Creek	Yes	2	U	2	2	2	U	2	58
Willow Creek	Yes	2	1	U	1	1	U	1	17
Windy Creek	Yes	2	1	2	U	1	U	1	8

[a] Dome Creek miles managed: State —11, BLM — 5

[b] Black River – miles managed: Doyon Ltd – 32 miles, USFWS – 242, BLM – 59

[c] Kandik River – miles managed: NPS – 32, Doyon, Ltd. – 16, State of Alaska – 12, BLM – 25

[d] Salmon Fork – miles managed: USFWS – 27, BLM – 52

E.1.1.1. Discussion of ORVs for Eligible Rivers

Dome Creek (Fortymile Subunit)

Historic ORV: Dome Creek, a tributary of O'Brien Creek in the Fortymile River drainage (Map 70), is of particular interest in the regional history of Interior Alaska in exemplifying small-scale capitalized entrepreneurs or businesses in mining placer gold deposits in Interior Alaska. The typical evolution of mining processes along placer gold-bearing ground includes original discovery and subsequent workings with hand techniques, small-scale capital projects, followed by larger-scale consolidation of claims and workings of lower-grade deposits. Each subsequent stage frequently erases the traces of the previous one.

The historic material remains along Dome Creek exemplify the remains of a small companies, that consolidated and worked the claims along the middle portion of Dome Creek, dating to the 1910s to 1930s, and which were not subsequently destroyed by later operations. Intact historic remains found include an eight-mile long ditch, at least two camp and cabin ruins related first to the ditch construction and then to later mining operations, worked and hydraulicked ground, and a complete sawmill.

Historic remains relating to other mining and trapping operations throughout much of the 20th century are also found along other portions of Dome Creek. There are other creeks in the region of comparison that have similar evidence of small placer mining companies, but the relative isolation of Dome Creek has allowed it to maintain its integrity. The site types are not necessarily rare in the region of comparison, but the integrity of the features on this creek provide more than just local significance. Dome Creek is regionally significant for historic values.

Because of these factors, the history of Dome Creek is considered to be an ORV.

Gold Run (Fortymile Subunit)

Historic ORV: Gold Run, a tiny tributary of Slate Creek in the upper drainage of the North Fork of the Fortymile River, is of particular interest in the regional history of Interior Alaska in exemplifying an isolated, early-20th century placer mining community, that focused on hand-working of shallow placer gold deposits. Because of the creek's isolation, it never underwent subsequent, larger-scale mining activities (e.g., hydraulicking; bulldozers and backhoes; dredges), that typically erase earlier, hand-worked traces of mining activity. As a result, about 100 historic features are found intact along a four mile stretch of the creek, most of them associated with early-20th century mining, including cabin ruins, ground and stilt caches, other caches of tools, ditches, hand-stacked tailings piles, sluice boxes, dams and dam gates, and prospects. While there may be other creeks in the region of comparison that have evidence of early hand-working placer mining, there sheer density of such sites along Gold Run makes it stand out with substantial value, and it is likely one of only a few such creeks in the region of comparison. Gold Run is regionally significant for historical values.

The eligible segment begins about one-half mile above the second tributary upstream on the south side from the mouth of Gold Run (T.4S., R. 25E., section 1, SE1/4SE1/4NE1/4 , Fairbanks Meridian) to the border of Doyon, Limited, lands approximately 0.2 miles above the mouth (Map 70).

Because of these factors, the history of Gold Run is considered to be an ORV.

Big Windy Creek (Steese Subunit)

Scenic ORV: The Big Windy Creek lies within the Yukon-Tanana Uplands which has a scenic quality of "A" according to BLM's Visual Resource Management (VRM) process (H-8410-1). A scenic quality rating of "A" means the landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications within the area have the most variety and most harmonious composition.

Big Windy Creek flows through a very narrow steep gradient canyon with birch and spruce uplands until the confluence with the South Fork of Birch Creek (Map 74). The focus for the river users is on the clear water course that is characterized by rapids and cascades created by boulders falling from granite cliffs and boulder talus slopes which constrict movement of the creek. Other sections of the creek closer to the confluence of South Fork, while still steep and narrow, are characterized by a plunge–pool system created by boulder fields. Elevations of surrounding ridge summits are about 3,200 feet while the creek valley is about 1,500 feet for an elevation change of 1,700 feet.

The hot springs in the area create a diverse, lush grass type vegetation and colorful green and red algae that contrast with the white of the granite cliffs and boulders, and the black of lichen covered rocks, as well as adjacent spruce and birch forests. Small springs, flows, pools and seeps allow water to flow over the face of the cliff creating unique views. The cliff face has massive fractured boulders. Pothole features created by smaller rocks caught in the current of Big Windy Creek can be seen in the creek bed. The hot springs raises the temperature of the water as far away as the confluence of South Fork with Birch Creek.

Due to the hot springs, the canyon has contrasting vegetation types unique to the area with large productive mature white spruce and paper birch on the south-facing slope and low paper birch, black spruce, and dwarf birch tundra in other areas or also on south-facing slope. This natural hot springs is one of a limited number of hot springs in central Alaska and is one of a few still undeveloped (Juday 1998).

The changes in elevation and topography over a relatively short river segment results in highly diverse scenery and visual attractions. The steep gradient and narrow canyon focus the attention of the viewer on the water, cliff and boulder areas, and diverse plants communities resulting from the hot springs. The natural undeveloped nature of this hot spring and adjacent river segment make it unique within the region.

Because of these factors, the Scenery of Big Windy Creek is considered to be an ORV.

Geologic ORV Of the three major hot springs east of Fairbanks in central Alaska, Big Windy Hot Springs on Big Windy Creek remains the only hot springs system that has not been extensively altered by human development (Juday 1998). Precipitation of dissolved minerals from cooling hot springs waters has created unusual and delicate geologic features at the site and provided an important mineral lick for Dall sheep. The springs, adjacent cliffs, and marshy areas provide habitat for unusual plant species, as well as for bacteria and algae that live only in the high-temperature environments of geothermal vents. Big Windy Hot Springs' geothermal vents provide excellent research opportunities for studying flow of mineralized water through an undisturbed hot springs system.

Big Windy Creek, particularly in its central section near the hot springs, has several rare features for a stream in the Yukon-Tanana Upland:

- It occupies a narrow V-shaped valley.
- It cascades over large, granitic boulders.
- It remains largely ice-free during the winter because of hot water contributed by the springs.
- Boulders caught in powerful eddies have ground smooth circular depressions called potholes into the bedrock.

Because of these factors, the geology of Big Windy Creek is considered to be an ORV.

Wildlife ORV: Wildlife and the associated ecosystem of Big Windy Creek is of at least regional significance. The presence of an undeveloped hot springs in this river results in unique wildlife and ecosystem values. Other hot springs in the area have been developed and most other central Alaska hot springs are either developed for resort use or have been modified substantially (Juday 1998). The hot springs serves as a mineral lick for a population of Dall sheep. They travel more than 20 km from the primary portion of sheep habitat in the area (in and beyond the headwaters of Big Windy Creek) to reach the lick and use a small cliff at the site. A 1962 ADF&G inventory reported a band of 76 Dall sheep near the hot springs on Big Windy Creek. All sheep in this population apparently use the lick. The lick is also used by moose.

The northern water shrew (*Sorex palustris*) was documented here and this represents the furthest north occurrence in its range (Cook et al. 1997). Another uncommon small mammal, the long-tailed vole (*Microtus longicaudis*) was also documented at the hot springs, which is near the northwest edge of its known distribution.

Several plant species occur here as disjunct populations or at the northern limits of their range. It is possible that unique thermophytic organisms, such as green and red algae and cyanobacteria occur in the hot springs. The hot water creates open water conditions through the winter on Big Windy Creek, which likely influences vegetation and wildlife species use for some distance downstream. Upstream of the Hot Springs a peregrine falcon nest site occurs on a riverside cliff and gyrfalcons forage and probably nest in the alpine environment of the headwaters. The drainage is regularly used by caribou of the Fortymile herd.

Because of these factors, the wildlife of Big Windy Creek is considered to be an ORV.

Salmon Fork Black River (Upper Black River subunit)

Wildlife ORV: Nesting bald eagles occur along the Black River (including the Salmon Fork) in what is probably the most northern dense nesting population of bald eagles in Alaska (Robert J. Ritchie, pers. comm.). Although similar densities of bald eagle nests occur along the Tanana River, this population occurs approximately 250 km north of that population and above the Arctic Circle. Thirty three bald eagle nests (not all active) were recorded in surveys conducted in 1994, 1996, and 1997; ten of these were on BLM-managed portion of the Salmon Fork mainstem (Ritchie and Rose, 1998). An additional active nest was observed during fisheries surveys in 2009, upstream of previous surveys.

Due to its remoteness, the BLM has limited data about other wildlife values of the Salmon Fork (Map 78). American peregrine falcon nest on river bluffs (two to three pairs). Based on a float trip in 1991, BLM biologist Winston Hobgood reported very abundant black bear, "the largest owl population I have encountered in 23 years observing wildlife in Alaska," and noted the presence of harlequin ducks. The Salmon Fork is used by subsistence hunters and trappers from Chalkyitsik and Fort Yukon. Game Management Unit 25(B), which includes the Salmon Fork, is one of the more productive furbearer trapping areas in the state. Chalkyitsik residents have reported that the Salmon Fork is an important moose hunting area for their community. Wildlife associated with this river are of at least regional significance.

Because of these factors, the wildlife of the Salmon Fork of the Black River is considered to be an ORV.

Fossil Creek (White Mountains Subunit)

Scenic ORV: Fossil Creek lies within the Yukon-Tanana Uplands which has a scenic quality of "A" according to BLM's VRM process (H-8410-1).

Fossil Creek is roughly 30 miles in length. It originates in broad valleys at about 3,000 feet elevation in the heart of the White Mountains, well above tree line (Map 74). High granitic type mountains rising from 4,000 to 5,000 feet in elevation frame these valleys. At five to eight miles downstream, the creek rapidly transitions from the tall rounded mountains and broad valleys to a steep narrow valley below tree line. An abrupt towering limestone ridge thrusts up, forcing Fossil Creek to turn 90 degrees to the south. This ridge of limestone holds Fossil Creek to its east side for nearly 20 miles. Along the ridge numerous "jags" punctuate from its nearly vertical sides and peaks. White cliff faces and scree slopes dominate the west side of the creek. Some of these exposed "jags" have natural arches carved through them. These natural arches are not uncommon along the ridge. Many are tucked away, but some like Windy Arch can be seen from many different directions from several miles away.

In sharp contrast to the knife-like limestone ridge on the west side, the more rounded darker granitic type mountains quickly rise up on the east side. This east side, unlike the west side, is mostly vegetated. The vegetation types within the valley primarily consist of white spruce and deciduous trees immediately along the creek rapidly changing to exposed barren slopes on the west side and sparse black spruce and open tundra on to the east.

The last 3-5 miles of Fossil Creek turn abruptly again to the west. The creek slices through the limestone ridge at what is known as Fossil Gap. Here, a number of fires have burned through the area in the past few decades further exposing limestone rock formations. The creek itself can also be nearly dry during the summer, most likely losing water into underground aquifers that later flow into Beaver Creek. Overall, during the winter months, Fossil Creek does not have the scenic values as during the summer months due to decreased light levels and snow covered vegetation and landscapes, but its scenic value still remains very high. A multiple-use winter trail follows the entirety of the drainage and two public use cabins, Caribou Bluff and Windy Gap, exist close to the creek. These cabins are log and blend into the natural environment.

Because of these factors, the scenery of Fossil Creek is considered to be an ORV.

Geologic ORV: Fossil Creek's drainage is defined by a prominent ridge of Early Silurian white Tolovana Limestone, for which the White Mountains were named. The Tolovana Limestone includes karst (limestone dissolution) features such as caves, natural arches, sinkholes, cold springs, and underground streams that, in Alaska, have been widely documented only in the Southeast. Development of karst features in high-latitude locations is thought to be impeded by seasonal freezing of near-surface groundwater or by destruction during periods of glaciation (Jennings 1983). The White Mountains represent one of the few recorded locations of these features in northern or western Alaska (ADF&G 2006). A limestone dissolution joint-type cave in the Fossil Creek drainage represents one of the largest examples of its kind in high-latitude North America (Juday 1989).

The geologic complexity of the area is compounded by northeast-southwest-trending thrust faults, a disconformable contact between the limestone and underlying volcanic rocks, and a wind gap marking a former stream channel stranded after Fossil Creek captured the drainage through headward erosion.

The Ordovician volcanic rocks underlying the Tolovana Limestone are a productive source of fossils, including brachiopods and sphinctozoan sponges. Several fossil locations on Fossil Creek have been the subject of paleontological research.

Because of these factors, the geology of Fossil Creek is considered to be an ORV.

E.1.2. Tentative Classification

Classification is a determination based on existing characteristics of a river area resulting from human-caused change or levels of development. The criteria for classification is provided by the Interagency Wild and Scenic Rivers Coordinating Council Technical Report: The Wild & Scenic River Study Process (1999) and BLM Manual 6400 Illustration 2, and is described below. The classification presented in this plan (Table E.3, “Classification Findings for Eligible Rivers”) is tentative.

1. **Wild rivers:** Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America. “Wild” means free of impoundments; essentially primitive with little or no evidence of human activity; the presence of a few inconspicuous structures, particularly those of historic or cultural values is acceptable; a limited amount of domestic livestock grazing or hay production is acceptable; little or no evidence of past timber harvest and no ongoing timber harvest; generally inaccessible except by trail and no roads railroads, or other provision for vehicular travel within the river area with a few existing roads leading to the boundary of the area are acceptable; and meets or exceeds (water quality) criteria or federally approved state standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river and for primary contact recreation (swimming) except where exceeded by natural conditions.

2. **Scenic rivers:** Those rivers or sections of rivers that are generally free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. “Scenic” means free of impoundments; largely primitive and undeveloped with no substantial evidence of human activity; the presence of small communities or dispersed dwelling or farm structures is acceptable; the presence of grazing, hay production , or row crops is acceptable; evidence of past or ongoing timber harvest is acceptable, provided the forest appears natural from the riverbank; accessible in places by road and roads may occasionally reach or bridge the river and the existence of short stretches of inconspicuous roads or railroads is acceptable; (water quality) goal that all waters of the United States are made fishable and swimmable.

3. **Recreational rivers:** Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. “Recreational” means some existing impoundment or diversion — the existence of low dams, diversions, or other modifications or the waterway is acceptable, provided the waterway remains generally natural and riverine in appearance; some development with substantial evidence of human activity; the presence

of extensive residential and a few commercial structures is acceptable; lands may have been developed for the full range of agricultural and forestry uses; may show evidence of past and ongoing timber harvest; readily accessible by road or railroad; the existence of parallel roads or railroads on one or both banks as well as bridge crossings and other river access points is acceptable; (water quality) goal that all waters of the United States are made fishable and swimmable.

Table E.3. Classification Findings for Eligible Rivers

River	Subunit	Tentative Classification
Dome Creek	Fortymile	Recreational
Gold Run	Fortymile	Wild
Big Windy Creek	Steese	Wild
Salmon Fork of the Black River	Upper Black River	Wild
Fossil Creek	White Mountains	Scenic

E.1.3. Suitability

Each eligible river segment is further evaluated during the planning process to assess whether or not it would be suitable for inclusion in the NWSR. The planning determination of suitability provides the basis for any decision to recommend legislation. Other federal agencies, the State, local entities, the public and other interests had the opportunity to review and comment on this report during the public comment period for the Eastern Interior Draft RMP/EIS. Any interest in designating or not designating was identified during this period, and this section was revised accordingly in the Proposed RMP/Final EIS.

Since the determination of suitability is considered a decision in the planning process, the suitability of these rivers will vary across the alternatives in the RMP. Below is a discussion on how each of the five eligible rivers meets the criteria of suitability, followed by the range of alternatives considered in the Eastern Interior Proposed RMP/Final EIS. Suitability is determined only for those sections on BLM-managed lands.

The suitability criteria outlined in the WSR Act and BLM Manual 6400 are:

1. Characteristics that do, or do not, make the area a worthy addition to the National System. These characteristics (free flowing and outstandingly remarkable values) are described in the WSR Act and may include additional factors.
2. The current status of land ownership and use in the area.
3. The reasonably foreseeable potential uses of the land and related waters that would be enhanced, foreclosed, or curtailed if the area were included in the National System.
4. The federal agency that will administer the area should it be added to the National System.
5. The extent to which the agency proposes that administration of the river, including the costs thereof, is shared by state and local agencies.
6. The estimated cost to the United States of acquiring necessary lands or interests in land within the corridor, as well as the cost of administering the area should it is added to the National System.
7. A determination of the extent that other federal agencies, the state, or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the National System.
8. An evaluation of local zoning and other land use controls in protecting the river's outstandingly remarkable values and preventing incompatible development.

9. The state/local government's capacity to manage and protect the outstandingly remarkable values on non-federal lands. This factor requires an evaluation of the river protection mechanisms available through the authority of state and local governments. Such mechanisms may include, for example, water quantity or quality, or protection of river-related values such as open space and historic areas.
10. The existing support or opposition of designation. Assessment of this factor will define the political context. The interest in designation or nondesignation by federal agencies, state, local, tribal governments; national and local publics; and the state's congressional delegation should be considered.
11. The consistency of designation with other agency plans, programs, and policies in meeting regional objectives. Designation may help or impede the goals of tribal governments or other federal, state, or local agencies. For example, designation of a river may contribute to state or regional protection objectives for fish and wildlife resources. Similarly, adding a river that includes a scarce recreation activity or setting to the National System may help meet statewide recreation goals. Designation might, however, limit irrigation and/or flood control measures in a manner inconsistent with regional socioeconomic goals.
12. The contribution to river system or basin integrity. This factor reflects the benefits of a "systems" approach (e.g., expanding the designated portion of a river in the National System or developing a legislative proposal for an entire river system — headwater to mouth — or watershed). Numerous benefits may result from managing an entire river or watershed, including the ability to design a holistic protection strategy in partnership with other agencies and the public.
13. The potential for water resources development. Identify any proposed water resource projects that may be foregone, as designation may limit development of water resources projects as diverse as irrigation and flood control measures, hydropower facilities, dredging, diversion, bridge construction and channelization.

Suitability — Dome Creek (Fortymile Subunit)

- Length: 16 miles
- Tentative classification: "recreational"

1. Characteristics which do or do not make the area a worthy addition to the NWSR.

   Dome Creek has outstandingly remarkable historic values and is free-flowing making it eligible for inclusion in the NWSR.

2. Status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses.

   The state has selected all of Dome Creek as part of their entitlement under the Statehood Act. Valid federal mining claims cannot be conveyed to the State and the State's topfiling will continue to be listed as a "selection." If the mining claim holders choose to convert these claims to state mining claims, or if they fail to meet federal requirements to maintain their claims and the claims are closed, the state would be able to prioritize these lands for conveyance. Most of Dome Creek has federal mining claims on it. The lands surrounding these claims were conveyed to the State, and in some cases, state lands lay within the one-half mile potential WSR corridor. The only lands BLM administers on Dome Creek are these mining claims, which may or may not remain under BLM management for the long-term.

There are 18 federal mining claims on Dome Creek. In the discussion on eligibility for Dome Creek, it is noted that the typical evolution of mining processes along placer gold-bearing ground includes original discovery and subsequent workings with hand techniques, small-scale capital projects, followed by larger-scale consolidation of claims and workings of lower-grade deposits. Each subsequent stage frequently erases the traces of the previous one. The existing claims could be mined and could erase the evidence of the historic material remains along Dome Creek that exemplify the remains of a small companies, that consolidated and worked the claims in the 1910s to 1930s. This would result in the loss of the ORV for Dome Creek. Mining these claims would be incompatible with designation of this creek into the NWSR.

There are no known commercial timber values in the area and no known leasable mineral potential. Some hunting or trapping occurs in the area. Active mining and OHV routes are found within the proposed river corridor. The river segment is not considered to be floatable and little, if any, recreational boating use is expected. Little subsistence use is thought to occur on Dome Creek.

3. Reasonably foreseeable potential uses of the land and related waters which would be enhanced, foreclosed, or curtailed if the area were included in the NWSR and the values which could be foreclosed or diminished if the area is not protected as part of the NWSR.

   The federal mining claims would still be valid if the creek is designated as a segment of the NWSR and the claims could be worked, which could potentially erase the historic features which are the Outstandingly Remarkable Value. Locatable mineral activities are not discretionary on the part of the administering agency. Therefore, the effects of designation and non-designation would be the same.

4. The Bureau of Land Management is the federal agency that would administer Dome Creek if it was added to the NWSR.

5. Ability of the agency to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

   The ability for the BLM to manage and/or protect the creek area is minimal. The state manages the uplands, there are 18 valid existing federal mining claims, and the federal lands have been prioritized for conveyance to the state. It is unlikely that there would be assistance from the state.

6. Estimated cost, if necessary, of acquiring lands, interests in lands, and administering the area if it is added to the NWSR.

   The federal government could buy out the existing mining claims if there were willing sellers, but the cost is unknown. It is unlikely that there would be willing sellers or assistance from the state.

7. The extent other agencies would participate in the preservation and administration of the river as a WSR.

   If designated, it is unlikely that there would be assistance from the state.

8. Local zoning and other land use controls.

Dome Creek is a tributary to O'Brien Creek, a designated "scenic" segment in the Fortymile WSR. There is no local or state zoning in this area. The state allows staking of state mining claims on state lands throughout most of Interior Alaska.

9. Ability of the State government to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

   Dome Creek is a tributary to O'Brien Creek, a designated "scenic" segment in the Fortymile WSR. The addition includes federal mining claims with state lands on two sides. The state lands in the Dome Creek area of the Fortymile are under the Upper Yukon Area Plan which identifies the area as General Use to maintain flexibility in management.

10. Support or opposition of designation.

    There is limited public support for designation of Dome Creek. The State of Alaska is strongly in opposition to wild and scenic river study and designation of river segments (ADNR 2008, 2013). Its position is that study and designation is in conflict with Section 1326(b) of ANILCA. The Alaska Mining Association (AMA 2013) and Fortymile Miner's Association opposes new designations in the area (AMA 2008). Additionally, Doyon, Limited Native Corporation is specifically opposed to designation of Dome Creek (Doyon 2013). Environmental groups voiced support for designation of Dome Creek (AWL et al. 2013).

11. Consistence with other agencies plans, programs and policies in meeting regional objectives.

    The Fortymile River area in general is managed under the State's Upper Yukon Area Plan. The area around Dome Creek is within Region 2 — North Fork unit and has management considerations for transportation needs while preserving the scenic values along the Taylor Highway, new and existing road and trails, reduce impacts to wildlife and other natural resources and minimum commercial development. Designation would be consistent with these management objectives.

12. Contribution to the river system or basin integrity.

    Dome Creek is a tributary to O'Brien Creek, a designated "scenic" segment in the Fortymile WSR. The addition of this headwater stream would add to the basin and river system approach already evident in the Fortymile WSR of 392 designated river miles.

13. Potential for water resources development.

    Dome Creek is a tributary to O'Brien Creek, a designated "scenic" segment in the Fortymile WSR. There is little interest or need for irrigation, flood control measures, hydropower, bridge construction or channelization along this segment. Some dredging activities associated with mining may occur. Some diversions or bank stabilization may occur to protect the Taylor Highway.

Finding for Dome Creek

Dome Creek possesses outstandingly remarkable historic values in that it exemplifies small-scale capitalized entrepreneurs or businesses in mining placer gold deposits in Interior Alaska from the 1910s to 1930s. This creek meets the tentative classification as a 'recreational" river due to the amount of development/disturbance and past mining. Dome Creek is suitable for designation under Alternative B of the RMP for the purpose of analysis. It is not suitable under the other alternatives because the BLM would be unable to protect the ORVs and the free-flowing condition of the creek. There are 18 valid existing mining claims on Dome Creek. Locatable mineral activities are not discretionary on the part of the administering agency. The existing claims could be mined and could erase the evidence of the historic material remains along Dome Creek that would result in the loss of the historic value of Dome Creek. In addition, there is limited federal, public, state, Tribal, local, or other interests in the designation. Although some environmental groups voiced support for designation, the State of Alaska adamantly opposes designation of new rivers and there is no known support within the Alaska Congressional Delegation. Additionally, Doyon, Limited Native Corporation, the largest private landowner in the Fortymile Subunit, is specifically opposed to designation of new rivers in the Fortymile area (Doyon 2013).

Suitability — Gold Run (Fortymile Subunit)

- Length: 4 miles
- Tentative Classification: “wild”

1. Characteristics which do or do not make the area a worthy addition to the NWSR.

   Gold Run has outstandingly remarkable historic values and is free-flowing making it eligible for inclusion in the NWSR.

2. Status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses.

   The BLM administers the entire segment of Gold Run under consideration. There are no existing federal mining claims on Gold Run. Generally, the water flow is too low to permit boating. There is a rough airstrip on the ridge above the creek between Gold Run and Jim Creek that hunters use to access the area, although this use is thought to be low. Some trapping has been known in the past, although there is none known to be occurring now. Subsistence use is thought to be low.

3. Reasonably foreseeable potential uses of the land and related waters which would be enhanced, foreclosed, or curtailed if the area were included in the NWSR and the values which could be foreclosed or diminished if the area is not protected as part of the NWSR.

   There are no known mineral, oil and gas, geothermal or coal resources in this area. There are no known commercial timber values in the area. Because of the remoteness of the area and the lack of known resources, is reasonable to assume that the existing minimum level of use would continue and that designation or non-designation would have no effect on the use level.

4. The Bureau of Land Management is the federal agency that would administer Gold Run if it was added to the NWSR.

5. Ability of the agency to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

   As discussed in the eligibility section E.1.1 new mining in the area could erase the outstandingly remarkable features. In Alternative A, the area would remain withdrawn from the location of new mining claims and from leasing of oil and gas. Gold Run is within the boundaries of the proposed Fortymile ACEC in Alternatives B, C, D, and E. The purpose of the ACEC is to protect caribou and Dall sheep habitat. The area is closed to the location of new mining claims in Alternatives B, C, and E and is open in Alternative D. It is unlikely that there would be assistance from the state.

6. Estimated cost, if necessary, of acquiring lands, interests in lands, and administering the area if it is added to the NWSR.

   Designation of Gold Run would not require the acquisition of any property as the lands are federal lands managed by the BLM. The additional costs anticipated from the management of the area as a WSR are expected to be minimal.

7. The extent other agencies would participate in the preservation and administration of the river as a WSR.

   If designated, it is unlikely that there would be assistance from the state.

8. Local zoning and other land use controls.

   Gold Run is a tributary to the North Fork of the Fortymile River, designated “wild” segment in the Fortymile WSR. There is no local or state zoning in this area.

9. Ability of the State government to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

   Gold Run is a tributary to the North Fork of the Fortymile River, a designated “wild” segment in the Fortymile WSR. The addition is entirely on BLM-managed lands, but would terminate at state land on the down stream end of the segment. The state lands in the Gold Run area of the Fortymile are under the Upper Yukon Area Plan which identifies the area as having High Value to protect the area for caribou habitat and calving.

10. Support or opposition of designation.

    There is limited public support for designation of Gold Run. The State of Alaska is strongly in opposition to wild and scenic river study and designation of river segments (ADNR 2008, 2013). Its position is that study and designation is in conflict with Section 1326(b) of ANILCA. The Alaska Mining Association (AMA 2013) and Fortymile Miner’s Association oppose new designations in the area (AMA 2008). Additionally, Doyon, Limited Native Corporation is specifically opposed to designation of Gold Run (Doyon 2013). Environmental groups voiced support for designation of Gold Run (AWL et al. 2013).

11. Consistence with other agencies plans, programs and policies in meeting regional objectives.

    The Fortymile River area in general is managed under the State’s Upper Yukon Area Plan. The area around Gold Run is within Region 1 — Middle Fork unit and has management considerations for multiple use, primarily habitat, recreation and mining. Activities should avoid or minimize conflict with caribou calving and other wildlife values. Designation would be consistent with these management objectives.

12. Contribution to the river system or basin integrity.

    The addition of this headwater stream would add to the basin and river system approach already evident in the Fortymile WSR System of 392 designated river miles. It is separated, however, from the North Fork by approximately nine miles of streams under private ownership.

13. Potential for water resources development.

    Gold Run is a tributary of the Middle Fork of the Fortymile River, a designated "wild" segment in the Fortymile WSR. There is little interest or need for irrigation, flood control measures, hydropower dredging, diversion, bridge construction or channelization along this remotely located segment.

Finding for Gold Run

Gold Run possesses outstandingly remarkable historic values in that it exemplifies an isolated, early 20th century placer mining community, which focused on hand-working of shallow placer gold deposits. Because of the creek's isolation, it never underwent subsequent, larger-scale mining activities that typically erase earlier, hand-worked traces of mining activity. Because the remains of the mining activity are unobtrusive and do not detract from the primitive appearance of the watershed, and the lack of other disturbances, Gold Run meets the tentative classification as a "wild" river. Gold Run is suitable for designation under Alternative B of the Proposed RMP for the purpose of analysis. It is not suitable under the other alternatives because there are alternative means to protect the ORVs and there is limited support for the designation. New mining could erase the ORV of this stream. In Alternative A of this EIS, the area would remain withdrawn from the location of new mining claims and from leasing of oil and gas. Gold Run is within the boundaries of the proposed Fortymile ACEC in Alternatives B, C, D, and E. The purpose of the ACEC is to protect caribou and Dall sheep habitat. The area is closed to the location of new mining claims in Alternatives B, C, and E and is open in Alternative D, but the area is very remote with poor access so it is unlikely that mining would occur here. Gold Run flows into a stream that feeds the North Fork (a designated "wild" river), but it is separated from the North Fork by approximately nine miles of streams under private ownership. In addition, there is limited federal, public, state, Tribal, local, or other interests in the designation. Although some environmental groups voiced support for designation, the State of Alaska adamantly opposes designation of new rivers and there is no known support within the Alaska Congressional Delegation. Additionally, Doyon, Limited Native Corporation, the largest private landowner in the Fortymile Subunit, is specifically opposed to designation of new rivers in the Fortymile area (Doyon 2013).

Suitability — Big Windy Creek (Steese Subunit)

- Length: 14 miles
- Tentative Classification: "wild"

1. Characteristics which do or do not make the area a worthy addition to the NWSR.

   Big Windy Creek has outstandingly remarkable scenic, geologic and wildlife values and is free-flowing making it eligible for inclusion in the NWSR.

2. Status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses.

   The river segment is wholly managed by the BLM and is in the Steese National Conservation Area, an area that Congress has established to protect caribou habitat. One portion of the river corridor was designated as the Big Windy Research Natural Area in the Steese National

Conservation Area RMP (BLM 1986a) to be managed for the primary purpose of research and education.

There are no private or state lands and there are no existing mining claims within one-half mile on either side of Big Windy Creek. In 1983, the BLM determined that Big Windy Creek is non-navigable.

The area is remote and receives very little use, primarily winter use of the hot springs. Some hunting or trapping may occur in the area. There is no known interest in the development of water resources in this area. The river segment is not considered to be floatable and little recreational use is expected. Little subsistence use is thought to occur in the area. All existing use is compatible with designation into the NWSR.

3. Reasonably foreseeable potential uses of the land and related waters which would be enhanced, foreclosed, or curtailed if the area were included in the NWSR and the values which could be foreclosed or diminished if the area is not protected as part of the NWSR.

   There is high locatable mineral potential, and no leasable mineral potential in the area with the exception of geothermal resources. There are no oil and gas or coal resources known in this area. There are no known commercial timber values in the area. Due to the area's remoteness and lack of available infrastructure, commercial use of resources in the area is unlikely. The infrequent recreational, subsistence, hunting, and trapping use discussed under #2 above is expected to continue and be neither enhanced nor foreclosed by designation of the creek into the NWSR.

4. The Bureau of Land Management is the federal agency that would administer Big Windy Creek if it was added to the NWSR.

5. Ability of the agency to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

   In Alternatives B, C, D, and E of this plan, Big Windy Creek would be closed to mineral entry which would protect the scenic, geologic and wildlife values of the area. It is unlikely that there would be assistance from the state.

6. Estimated cost, if necessary, of acquiring lands, interests in lands, and administering the area if it is added to the NWSR.

   Designation of Big Windy Creek would not require the acquisition of any property because the lands are federal lands managed by the BLM. The additional costs anticipated from the management of the area as WSR is expected to be minimal.

7. The extent other agencies would participate in the preservation and administration of the river as a WSR.

   If designated, it is unlikely that there would be assistance from the state.

8. Local zoning and other land use controls.

   Big Windy Creek is a tributary of the South Fork of Birch Creek, designated "wild" segment in the Birch Creek WSR. There is no local or state zoning in this area.

9. Ability of the State government to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

   Big Windy Creek is a tributary of the South Fork of Birch Creek, designated "wild" segment in the Birch Creek WSR. The addition is entirely on BLM-managed lands.

10. Support or opposition of designation.

    The State of Alaska is strongly in opposition to wild and scenic river study and designation of river segments (ADNR 2008, 2013). Its position is that study and designation is in conflict with Section 1326(b) of ANILCA. The Alaska Mining Association (AMA 2013) and other industry groups are also opposed. Doyon, Limited Native Corporation is generally opposed to recommending additional river segments for inclusion in the NWSR, but did not specifically mention Big Windy Creek in their comments (Doyon 2013). Organized environmental groups were in support of designation (AWL et al. 2013). The Tanana Chiefs Conference, Council of Athabascan Tribal Governments, and National Congress of American Indians passed resolutions in support of Alternative B of the Draft RMP (TCC 2013, CATG 2013, NAIC 2012). While the resolutions did not specifically mention wild and scenic rivers, Alternative B is the alternative that recommended Big Windy Creek as suitable for designation.

11. Consistence with other agencies plans, programs and policies in meeting regional objectives.

    The addition of Big Windy Creek to the NWSR would be consistent with the Birch Creek River Management Plan. BLM-managed lands adjacent to Birch Creek are addressed in the Steese National Conservation Area RMP and adding Big Windy Creek would be consistent with the current plan.

12. Contribution to the river system or basin integrity.

    The addition of this headwater stream would add to the basin and river system approach already evident in the Birch Creek WSR System of 116 designated river miles. It is separated, however, from the South Fork by approximately two miles of undesignated stream.

13. Potential for water resources development.

    Big Windy Creek is a tributary of the South Fork of Birch Creek, a designated "wild" River. There is little interest or need for irrigation, flood control measures, hydropower dredging, diversion, bridge construction or channelization along this remotely located segment.

Finding for Big Windy Creek

Big Windy Creek possesses outstandingly remarkable scenic, geologic and wildlife values. The varied geologic/hydrologic features and the unique contrasting vegetation resulting from the hot springs provide outstandingly remarkable scenery. The hot springs also provide unique habitat for wildlife. This river meets the tentative classification as a "wild" river due to its primitive appearance, its general inaccessibility, and its high water quality. Big Windy Creek is suitable for designation under Alternative B of the Proposed RMP for the purpose of analysis.

It is not suitable under the other alternatives because it is within the Steese National Conservation Area and in all alternatives in this EIS, this area would be closed to mineral entry and would have a suite of management decisions that would protect the ORVs of this river. Additionally, there is limited federal, public, state, Tribal, local, or other interest in the designation. Although some environmental groups voiced support for designation, the State of Alaska adamantly opposes designation of new rivers and there is no known support within the Alaska Congressional Delegation.

Suitability — Salmon Fork of the Black River (Upper Black River Subunit)

- Length: 52 miles
- Tentative Classification: "wild"

1. Characteristics which do or do not make the area a worthy addition to the NWSR.

   Salmon Fork has outstandingly remarkable wildlife values and is free-flowing making it eligible for inclusion in the NWSR.

2. Status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses.

   The BLM manages the upper reaches of the Salmon Fork, from the border with Canada downstream 52 miles to the Yukon Flats National Wildlife Refuge. These lands have been selected by the State to meet their land entitlement under the Statehood Act. The State has prioritized these lands at a level 14, the lowest priority rating. Due to the low prioritization, we can assume that BLM will retain management of these lands. There are no Native allotments along the river.

   In 1980, the BLM determined that the Salmon Fork is a navigable stream and in 2003 the BLM issued a recordable disclaimer of interest to the State of Alaska for the bed of the Salmon Fork Black River from its confluence with the Black River upstream approximately 74 river miles to the International Boundary.

   There are no federal or state mining claims on the Salmon Fork. The Salmon Fork is an important subsistence area for the people of Chalkyitsik (Chalkyitsik Village Council 2008). Because of its remoteness, little recreational boating occurs on the Salmon Fork although the river is boatable and floatable.

3. Reasonably foreseeable potential uses of the land and related waters which would be enhanced, foreclosed, or curtailed if the area were included in the NWSR and the values which could be foreclosed or diminished if the area is not protected as part of the NWSR.

   The potential for solid or fluid minerals in the area is low. There is no infrastructure in the area; the nearest road is over 60 miles away and is on the other side of the Yukon River. It is reasonable to conclude that the existing uses will continue on these lands and waters with little increase. No uses will be precluded if the area was included in the NWSR and no values would be foreclosed or diminished if the area is not protected as part of the NWSR.

4. The Bureau of Land Management is the federal agency that would administer the Salmon Fork Black River if it was added to the NWSR.

5. Ability of the agency to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

The Salmon Fork Black River is within the proposed Salmon Fork ACEC in Alternatives B, C, D, and E of the plan. Restrictions within the area vary by alternative, but the two uses that are most likely to have an effect on the ORVs are gold mining and oil and gas development. In Alternatives B and E, the ACEC is closed to both uses. In Alternative C, the ACEC is open to the location of new mining claims and closed to mineral leasing. In Alternative D, the ACEC is open to the location of new mining claims and open to leasing with minor constraints. In all alternatives, the river watershed is considered a Riparian Conservation Area with management decisions that would protect the river.

6. Estimated cost, if necessary, of acquiring lands, interests in lands, and administering the area if it is added to the NWSR.

   Designation of Salmon Fork Black River would not require the acquisition of any property because the lands are federal lands managed by the BLM. The additional costs anticipated from the management of the area as a WSR is expected to be minimal.

7. The extent other agencies would participate in the preservation and administration of the river as a WSR.

   If designated, it is unlikely that there would be assistance from the state.

8. Local zoning and other land use controls.

   The Salmon Fork Black River is located in a remote section of Interior Alaska on BLM-managed lands and flows into Yukon Flats National Wildlife Refuge. There are no local or state zoning in this area.

9. Ability of the State government to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

   The Salmon Fork Black River segment is entirely on BLM-managed lands. However, because the river is navigable, the bed of the river is state-managed land.

10. Support or opposition of designation.

    The State of Alaska is strongly in opposition to wild and scenic river study and designation of river segments (ADNR 2008, 2013). Its position is that study and designation is in conflict with Section 1326(b) of ANILCA. The Alaska Mining Association (Alaska Miners Association 2013) and other industry groups are also opposed. Doyon, Limited Native Corporation is generally opposed to recommending additional river segments for inclusion in the NWSR, but did not specifically mention the Salmon Fork in their comments (Doyon 2013).

    One individual recommended that the Salmon Fork be considered for designation under the WSR Act during public scoping for the Eastern Interior Draft RMP (Matesi 2008). Organized environmental groups were in support of designation (AWL et al. 2013, Upper Black River Working Group 2013). The Gwichyaa Zhee Gwich'in Tribal Government and Chalkyitsik Village Council, both federally recognized tribes, support designation of the Salmon Fork as a WSR. This support was noted in their comments on the Draft RMP/EIS and during cooperating agency review of the preliminary Proposed RMP. Tribes specifically requested that the Salmon Fork be recommended for designation as a WSR in

Alternative E of the Proposed RMP/Final EIS (Gwichyaa Zhee Gwich'in Tribal Government and Chalkyitsik Village Council 2015). The Tanana Chiefs Conference and Council of Athabascan Tribal Governments both past resolutions in support of Alternative B of the Draft RMP (TCC 2013, CATG 2013). While the resolutions did not specifically mention wild and scenic rivers, Alternative B is the alternative that recommended the Salmon Fork as suitable for designation. The National Congress of American Indians passed a resolution supporting the "listing and approval of Wild Scenic River Status for... Salmon River" (NAIC 2012).

11. Consistence with other agencies plans, programs and policies in meeting regional objectives.

    Yukon Flats National Wildlife Refuge manages their lands to maintain the natural environment consistent with natural ecological processes while providing opportunities for hunting, fishing, wildlife observation and photography and other outdoor recreation in a natural setting. The addition of the Salmon Fork Black River to the NWSR would be consistent with these management objectives.

12. Contribution to the river system or basin integrity.

    No other rivers or segments are identified as eligible for inclusion to the NWSR in this area.

13. Potential for water resources development.

    The Salmon Fork Black River is very remote. There is little interest or need for irrigation, flood control measures, hydropower dredging, diversion, bridge construction or channelization along this remotely located segment.

Finding for the Salmon Fork

The Salmon Fork of the Black River possesses outstandingly remarkable wildlife values that include the most northern dense nesting population of bald eagles in Alaska. This river meets the tentative classification as a "wild" river due to its primitive appearance, its general inaccessibility, and its high water quality. Salmon Fork is suitable for designation under Alternative B of the Proposed RMP for the purpose of analysis. It is not suitable under the other alternatives for several reasons. In 2003, the BLM issued a recordable disclaimer of interest to the State of Alaska for the bed of the Salmon Fork Black River from its confluence with the Black River upstream approximately 74 river miles to the International Boundary. Although some tribes and environmental groups voiced support for designation, the State strongly opposes new designations into the NWSR. There is no indication of support from the Alaska Congressional Delegation. In addition, the Salmon Fork is within a proposed ACEC in Alternatives B, C, D, and E of the plan. Restrictions within the area vary by alternative, but the two uses that are most likely to have an effect on the ORVs are gold mining and oil and gas development. In Alternatives B and E, the ACEC is closed to both uses. In Alternative C, the ACEC is open to the location of new mining claims and closed to mineral leasing. In Alternative D, the ACEC is open to the location of new mining claims and open to leasing with minor constraints. In all alternatives, the river watershed is considered a Riparian Conservation Area with riparian area restrictions that would sufficiently protect the outstandingly remarkable features.

Suitability — Fossil Creek (White Mountains Subunit)

- Length: 23 miles
- Tentative Classification: "scenic"

1. Characteristics which do or do not make the area a worthy addition to the NWSR.

   Fossil Creek has outstandingly remarkable scenic and geologic values and is free-flowing making it eligible for inclusion in the NWSR.

2. Status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses.

   Fossil Creek lies wholly within the White Mountains National Recreation Area established by ANILCA to provide for public outdoor recreation use and enjoyment and for the conservation of the scenic, scientific, historic, fish and wildlife and other values contributing to public enjoyment of such area. There are no private or state lands and no existing mining claims within one-half mile on either side of the creek. In 1982, the BLM determined that Fossil Creek is non-navigable.

   Fossil Creek receives an estimated 1,000 recreational visits each year, mostly during the winter season. Of these 1,000 visits, an estimated 50 are from hikers and hunters during the summer and fall. Hunting is almost entirely for Dall sheep in the surrounding limestone jags. Water flow on Fossil Creek is generally too low to permit boating. Little subsistence use is thought to occur in the area. There are no existing uses that are incompatible with designation.

3. Reasonably foreseeable potential uses of the land and related waters which would be enhanced, foreclosed, or curtailed if the area were included in the NWSR and the values which could be foreclosed or diminished if the area is not protected as part of the NWSR.

   Recreation is, and is expected to continue to be, the primary use of the area. It is reasonable to expect recreational use to increase in the area whether Fossil Creek is designated as part of the NWSR or not. Designation would have some effect on proposed recreation development in the area, requiring greater care in screening to maintain the scenic quality of the area.

4. The Bureau of Land Management is the federal agency that would administer Fossil Creek if it was added to the NWSR.

5. Ability of the agency to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

   Fossil Creek is closed to the location of new mining claims by ANILCA. In all alternatives of the EIS, Fossil Creek would be closed to mineral leasing. Also in all alternatives, this area would be in a Limited OHV designation, allowing for winter use of snowmobiles 1,000 pounds curb weight and less and requiring a permit or Plan of Operations for all other OHV use. These restrictions would protect the scenic and geologic ORVs of Fossil Creek.

6. Estimated cost, if necessary, of acquiring lands, interests in lands, and administering the area if it is added to the NWSR.

   Designation of Fossil Creek would not require the acquisition of any property because the lands are federal lands managed by the BLM. The additional cost anticipated from the management of the area as WSR is expected to be minimal.

7. The extent other agencies would participate in the preservation and administration of the river as a WSR.

If designated, it is unlikely that there would be assistance from the state.

8. Historical or existing rights which could be adversely affected.

   There are no historical or existing rights that would be adversely affected by designation.

9. Ability of the State government to manage and/or protect the river area or segment as a WSR, or other mechanisms (existing or potential) to protect identified values other than WSR designation.

   The Fossil Creek segment is entirely on BLM-managed lands.

10. Support or opposition of designation.

    The State of Alaska is strongly in opposition to wild and scenic river study and designation of river segments (ADNR 2008, 2013). Its position is that study and designation is in conflict with Section 1326(b) of ANILCA. The Alaska Mining Association (AMA 2013) and other industry groups are also opposed. Doyon, Limited Native Corporation is generally opposed to recommending additional river segments for inclusion in the NWSR, but did not specifically mention the Fossil Creek in their comments (Doyon 2013). Organized environmental groups were generally in support of designation (AWL et al. 2013). The Tanana Chiefs Conference, Council of Athabascan Tribal Governments, and National Congress of American Indians passed resolutions in support of Alternative B of the Draft RMP (TCC 2013, CATG 2013, NAIC 2012). While the resolutions did not specifically mention wild and scenic rivers, Alternative B is the alternative that recommended Fossil Creek as suitable for designation.

11. Consistence with other agencies plans, programs and policies in meeting regional objectives.

    The White Mountains NRA is adjacent to state lands managed under the State's Eastern Tanana (Fairbanks Region) and the Yukon Tanana (Lower Tanana Region) Area Plans. The Eastern Tanana management focus is land development, multiple and sustained yield of resources and protection of key habitats, fisheries and wildlife populations. Management of lands within the Yukon Tanana Plan that are adjacent to the White Mountains NRA will be to continue in their natural state with some development associated with utilities communications and roads. Yukon Flats National Wildlife Refuge manages their lands to maintain the natural environment consistent with natural ecological processes while providing opportunities for hunting, fishing, wildlife observation and photography and other outdoor recreation in a natural setting. The addition of Fossil Creek to the NWSR would be consistent with these management objectives.

12. Contribution to the river system or basin integrity.

    The addition of this headwater stream would add to the basin and river system approach already evident in the Beaver Creek WSR System of 127 designated river miles.

13. Potential for water resources development.

    Fossil Creek is located within the White Mountains National Recreation Area. There is little interest or need for irrigation, flood control measures, hydropower dredging, diversion, bridge construction or channelization along this remote segment.

Finding for Fossil Creek

Fossil Creek possesses outstandingly remarkable scenic and geologic values. Scenic qualities include contrasting topography and varied vegetation. Geologic values include karst features, which are rare in Alaska outside of the southeast panhandle. This river meets the tentative classification as a “scenic” river due to its largely primitive appearance, and its trail access. Fossil Creek is suitable for designation under Alternative B of the RMP for the purpose of analysis. It is not suitable under the other alternatives because alternate means of protection are in place. ANILCA closed this area to the location of new mining claims and in all alternatives of this EIS, the area would be closed to mineral leasing and limit OHV use to the winter season. These decisions would be sufficient to protect the ORVs for Fossil Creek. In addition, support for designating Fossil Creek is limited. Although some environmental groups voiced support for designation, the State of Alaska adamantly opposes designation of new rivers and there is no known support within the Alaska Congressional Delegation.

E.2. Outstanding Remarkable Values on Designated Rivers

The following sections describes the ORVs for wild and scenic rivers designated by ANILCA. The Eastern Interior RMP makes a determination of the ORVs for the Birch Creek, Beaver Creek, and Fortymile WSRs. ORVs are typically identified in a study prior to the designation, but the Birch Creek, Beaver Creek, and Fortymile WSRs were designated by ANILCA without these specific values identified by Congress. In these cases, managers typically develop ORVs from study reports and other documentation of management activities and intentions as well as incorporating current data and expertise.

ORVs are defined by the WSR Act as those characteristics that make the river worthy of special protection. These can include scenery, recreation, fish and wildlife, geology, history, culture, and other similar values, which are to be considered in determining eligibility for wild and scenic river designation. The WSR Act states that “Each component of the National Wild and Scenic Rivers System shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values.”

E.2.1. Outstanding Remarkable Values for Birch Creek

Birch Creek WSR begins approximately one mile upstream from the confluence of Twelvemile and Birch Creeks, near Mile 94 of the Steese Highway, and ends at the Steese Highway – Birch Creek bridge, near Mile 140 of the Steese Highway, a distance of 126 river miles. Approximately 77 miles of Birch Creek WSR flows through the Steese National Conservation Area, which was also established by ANILCA. The National Conservation Area is managed by the BLM and managed pursuant to the applicable provisions of the Federal Land Policy and Management Act. Special values to be considered in planning and management of the area are caribou habitat and Birch Creek WSR (ANILCA Section 401.)

The final 13 miles of the designated river (upstream from the Steese Highway bridge near Mile 140) flows through lands owned by Doyon, Limited. While these final 13 miles are designated as “wild,” the BLM does not manage these lands.

Historical Review Birch Creek

Proposed Birch Creek Wild and Scenic River Final Environmental Statement. This document was prepared by the Alaska Planning Group of the U.S. Department of the Interior in 1975 and addressed the impact of designating a portion of Birch Creek as a component of the NWSR. Specific values of the river were discussed in the section "Description of the Environment," however no formal determination of ORVs was made. The document reviewed 135 miles of the 314 mile-long Birch Creek.

Pertinent statements on the values of the river in the Environmental Statement include:

- "Spectacular schist examples are found along the river in rock outcroppings and on adjacent hillsides where sheer rock walls have resisted the erosive action of the water. These outcropping and coloration of the exposed bedrock are of outstanding interest to the layman as well as the geologist." (page 30)
- "The area adjacent to the lower 35 miles of the proposed Wild River Area has been identified by the Alaska Department of Fish and Game, in the publication Alaska's Wildlife and Habitat, as a significant waterfowl molting and nesting area for lesser scaup, pintails, widgeons, mallards, green-winged teals, white-winged scoters, buffleheads, American goldeneyes, canvasbacks, and shovelers. Trumpeter swans also may nest in the area. Canada and white-fronted geese and little brown cranes are common in the wet muskeg areas." (page 41)
- "The American peregrine falcon (Falco peregrines anatum) is known to nest along Birch Creek. As the peregrine falcon is a threatened species (Threatened Wildlife of the United States, 1973), the nesting sites found along Birch Creek cliffs are considered quite significant." (page 41)
- "Other area wildlife of special interest are the timber wolf and American osprey." (page 41)
- "Birch Creek offers outstanding recreational opportunities for non-motorized 'float-boat' use for the experienced canoeist (canoeing, kayaking, rafting). It is one of the very few clearwater rivers in the State with road access at two points on an otherwise undisturbed river segment. The recreationist is offered a wilderness experience along the river without having to pay the high costs of aircraft transportation—a unique proposition in Alaska." (page 48)

A Proposal for Protection of Eleven Alaskan Rivers, Final Environmental Statement . This document was prepared by the Department of the Interior Heritage Conservation and Recreation Service, June 1980. It evaluates the impact of protecting the natural environment within a four-mile corridor along eleven rivers in Alaska, including Birch Creek. No specific values were noted for Birch Creek.

Alaska National Interest Lands Conservation Act (ANILCA) December 1980. Congress established the Birch Creek WSR in ANILCA Section 603 in which the Wild and Scenic River Act was amended to add the following paragraph:

"Birch Creek, Alaska: The segment of the main stem from the south side of the Steese Highway in township 7 north, range 10 east, Fairbanks meridian, downstream to the south side of the Steese Highway in township 10 north, range 16 east, to be administered by the Secretary of the Interior."

ANILCA designated Birch Creek as a "wild" pursuant to theWSR Act. The values of the river were not discussed. ANILCA further directed the Secretary of the Interior to establish detailed boundaries and to prepare a management and development plan.

Birch Creek River Management Plan. This document was prepared by the BLM and USFWS, December 1983. It determined the detailed boundaries for the river corridor and established a management and development plan. While values in the river corridor were discussed, ORVs were not determined.

Pertinent statements on the values of the river in the River Management Plan include:

- "Birch Creek provides for a wide variety of primitive-based recreation opportunities.... Attractive, natural campsites are abundant along the river, including the many gravel bars as well as upland forested areas. Birch Creek is easily accessible from Fairbanks via the State-maintained Steese Highway." (page 8)
- "Scenic viewing opportunities are one of the region's most valuable recreational resources. Occasional cliffs and outcroppings of bedrock contrast with the green mosaic formed by surrounding vegetation on low rolling hills." (page 8)
- "A portion of the Circle to Fairbanks Historic Gold Rush Trail, which has been submitted for nomination to the National Register of Historic Places, passes through the river corridor." (page 23). Note: Upon subsequent review, it was determined that this trail does not pass through the river corridor.

Findings for Birch Creek

The following paragraphs evaluate the scenic, recreational, geologic, fish, wildlife, cultural, historic, and other values for Birch Creek WSR. See section E.1 Overview of the Process for a description of BLM criteria used to interpret these values.

Scenic

Evaluation of Present Situation:

The Birch Creek WSR Corridor lies within the Yukon-Tanana Uplands which has a scenic quality of "A" according to BLM's VRM process. See Appendix D.2 Scenic Quality.

The upper reach of Birch Creek flows through a narrow winding canyon with birch and spruce upland. A boater's focus is on the water course of riffle-pools with small rapids emptying into shallow pools; there are opportunities, however, for glimpses of historic structures in an otherwise natural landscape. Some shallow gravel bars offer contrast with the water and upland vegetation.

At the confluence with Harrington Creek the river changes character as the channel widens with a backdrop of low rounded hills and mountains. Short sections of rapids over a an eight-mile stretch through outcropping bedrock create contrast with the water and the varied vegetation types which include white and black spruce, birch and aspen, alpine tundra and black spruce bog uplands. Gravel bars are larger and higher with willow and alder shrubs and congregations of large debris along point bars creating unique visual points of interest. Upland banks are also higher in many stretches with four-to-six foot drops to water level. There are more opportunities to glimpse historic cabins and hike to higher elevations for outstanding views of the river system.

The lower section of Birch Creek enters the Yukon Flats where the river valley widens to miles and the river meanders with numerous channels with broad gravel bars. Cliff areas with ice lenses and loess soils are evident along this lower stretch. There are also unique areas where trees have lodged along the river bed in mid channel and create a bone-yard effect. Diverse vegetative types such as closed spruce forest, open low-growing spruce, and treeless bog offers distinctive contrast between the water, gravel bars and uplands creating unique views and changing views along Birch Creek. The river again approaches the foothills with a more confined meandering channel with oxbows and sloughs before it finally breaks free into the flats. The viewshed is confined again with small cliff-like banks.

Finding:

The changes in topography from a headwater stream to a more mature river with meander bends and braided systems add diversity to a relatively short river segment. The eight-mile stretch of intermittent extruding bedrock with interspersed rapids creates visual contrast with the surrounding vegetation, gravel bars and water. The range of foreground hills, middle distant mountains, broad flats and foreground hills as one floats down the river creates a mosaic of backdrops for floaters. The small number of historical cabins that blend with the landscape and are mostly hidden from view add some variety and points of interest to the area. The variety of vegetation types and the seasonal colors are an exemplary example for Interior Alaska. Because of these characteristics, the scenic value of Birch Creek is found to be outstandingly remarkable.

Recreational

Evaluation of the Present Situation:

Birch Creek, flowing for the most part through the Steese National Conservation Area, offers outstanding recreational opportunities for non-motorized “float-boat” use for the experienced canoeist (canoeing, kayaking, rafting). It is one of the very few clearwater rivers in the State with road access at two points on an otherwise undisturbed river segment. The recreationist is offered a multi-day wilderness river experience without having to pay the high costs of aircraft transportation. Many rivers in Interior Alaska have extensive motorized use, while Birch Creek offers an 8 to 14 day non-motorized float opportunity. It is one of the few accessible rivers that offer a floater the experience of all phases of a river, from headwater stream to full meandering river with a whitewater experience. Floaters experience solitude, closeness with nature and wildlife, escape from personal pressures, everyday demands of life and crowds, and exploration of new areas. The chance of seeing wildlife is good with peregrine falcons, bald eagles, and beaver being common. Wolf, bear, fox, lynx, and occasionally caribou may be seen.

River floaters demographics are local Fairbanks, Anchorage, national, and international. They come to float a multi-day wilderness type experience as a major part of their Alaska destination. The clear-water whitewater is unique for open floaters, as well as smaller whitewater craft. Hunters from the Lower-48 bring rafts and canoes for the float-hunting opportunities. International use has occurred in the past and is anticipated to occur again in the future with users from Germany the primary user group willing to pay for a guided experience. While floating the river, users also enjoy seeing wildlife, fishing, hunting, remote primitive camping, hiking to higher vista points, amateur geology, and photography.

Finding:

Birch Creek is recognized regionally and nationally as an accessible, freshwater and whitewater wild river providing a multi-day primitive floating and camping experience which is considered unique. The rivers presentation of diverse geological values is unique within the region that includes a stretch of whitewater caused by bedrock outcrops and the changes in river character from headwater to mature stream. This creek is a good example of the typical diversity of vegetation types and seasonal variations that enhance the river experience. The recreational value of Birch Creek is found to be outstandingly remarkable.

Geologic

Evaluation of the Present Situation:

Most of the bedrock along Birch Creek WSR consists of Paleozoic to Late Precambrian metamorphic rocks (primarily schist and quartzite) that are among the oldest rocks in Alaska. Geologists formerly referred to these rocks as Birch Creek Schist, a name inspired by the characteristic outcrops along this river.

Also exposed in cutbanks along Birch Creek are melting ice lenses, part of the permanently frozen soils, or permafrost, underlying much of the river valley. Supporting evidence and examples of the geologic processes include, but are not limited to:

- Active landslides and thawing permafrost along the river provide opportunities to observe dynamic and ongoing geologic processes.
- Birch Creek's usually clear water is characteristic of certain Interior Alaska rivers that, unlike most rivers in the state, drain terrain that did not experience extensive continental and/or alpine glaciation.
- Classic exposures of Birch Creek Schist are found in sheer rock walls below Harrison Creek and along both banks at Shotgun Rapids.
- Numerous periglacial features, including altiplanation terraces and tors, can be seen from the river on nearby ridges.

Finding:

Outcrops of schist along the river could be considered "textbook" in that they served as inspiration for naming the Birch Creek Schist. However, this rock type is widely dispersed in the Yukon-Tanana Upland, and similar bluffs and rapids exist on the region's other rivers. Similarly, the periglacial features, permafrost exposures, and general hydrology of Birch Creek are widely distributed in the region. Geology is therefore not an outstanding remarkable value of Birch Creek.

Fish Populations and Habitat

Evaluation of the Present Situation:

Birch Creek supports 12 known species of fish and has one of the highest diversity of fish in the region.

Anadromous species: Birch Creek supports populations of Chinook, chum, and coho salmon. Various environmental factors make it difficult to gather population data for Chinook salmon in Birch Creek. The relative health of Birch Creek Chinook may be assessed to some extent by the health of Yukon River Chinook salmon that are still experiencing below average returns (Volk et al. 2009). With below average returns in the Yukon River, all streams providing spawning and rearing habitat for Chinook salmon are highly important both locally and regionally.

Resident species: Birch Creek also supports healthy and viable populations of Arctic grayling, round and humpback whitefish, sheefish, least cisco, northern pike, burbot, slimy sculpin, and blackfish.

Habitat: Major stream-disturbing activities such as placer mining have been active in the Birch Creek watershed for over one hundred years. While it is not known to what degree these activities affected the various fish populations, Birch Creek does provide critical habitat for up to many fish species making it one of the most diverse watersheds in the region.

Finding:

Birch Creek has one of the highest diversity of fish of all rivers in the region. This diversity makes fisheries an outstanding remarkable value for Birch Creek.

Wildlife Populations and Habitat

Evaluation of the Present Situation:

Birch Creek WSR supports a dense nesting population of American peregrine falcons that occur on riverside cliffs and bluffs. The species was an Endangered Species under the Endangered Species Act at the time of Birch Creek WSR designation and was delisted in 1999 but remains a BLM Alaska sensitive species. Similar densities of nesting peregrines occur on few other rivers in the region (Fortymile WSR and the Yukon River within Yukon-Charley Rivers National Preserve).

Peregrine falcons are one component of a complete assemblage of subarctic wildlife species present along Birch Creek at natural levels of abundance and among habitats and plant communities essentially unchanged from natural conditions. The riparian habitats supported by the river are productive and provide key habitat for many species. River corridor and adjacent habitat combine to support this complete assemblage of species. Other raptors nesting along the river include frequently-observed red-tailed (Harlan’s) hawks, a few nesting bald eagles, and occasional osprey. The lower section of the river supports extensive riparian vegetation that is excellent moose habitat. The many wetlands and oxbow lakes in the lower river corridor also support important waterfowl and shorebird nesting, including significant waterfowl molting and nesting of lesser scaup, pintails, widgeons, mallards, green-winged teals, white-winged scoters, buffleheads, American goldeneyes, canvasbacks, and shovelers. Trumpeter swans (BLM Alaska sensitive species) also nest in oxbow and other lakes in the river corridor.

Wolves occur in the area and at least one den site is known to occur in the river corridor. Caribou of the Fortymile herd travel on the river ice in winter and use the adjacent uplands in winter and summer. The river is a popular hunt area (sport and subsistence) for moose and caribou, via float boats and (in the lower portion) motorized river boats. The river receives its heaviest use during moose hunting season.

Finding:

While the wildlife values of Birch Creek are high, they do not constitute an ORV of at least regional significance. Wildlife values do contribute to the recreational ORV for the river as wildlife watching is often component of recreational activities.

Cultural

Evaluation of the Present Situation:

There are eight prehistoric sites within or immediately adjacent to the Birch Creek WSR Corridor. They are all shallow or surface lithic sites; therefore, likely late prehistoric Athabascan sites. Most are located on high promontories; therefore, likely hunting lookout sites. One potential early historic Athabascan village site, which may have once contained a prehistoric component, is also located inside the corridor. However, the location of this site is known only from historic documentation, and has never been verified archaeologically, despite repeated attempts by different researchers over the past four decades. A couple of the sites have features or topographic settings that may indicate short-term camping locales. None have been evaluated for eligibility to the National Register of Historic Places, although field notes indicate that all likely have at least some buried, undisturbed deposits, which along with other variables may make them eligible to the Register.

An evaluation of the topographic settings inside the Birch Creek WSR Corridor indicates that, although additional prehistoric sites may be found, they will not likely vary in site type from those already discovered. For example, there is little likelihood of locating a caribou drive line site, or a permanent or winter village site, within the corridor. If such rare types of sites were found inside the corridor, they would likely contribute to culture or prehistory being an ORV in any future re-evaluation of Birch Creek. Similarly, if prehistoric utilization of riverine resources (e.g., salmon) are discovered, such a regionally relatively rare site type would too likely contribute to a prehistoric ORV re-evaluation for Birch Creek.

Finding:

The prehistoric uses of the Birch Creek corridor (such as short-term camping, lookout hunting sites) are typical of this and many other river settings in the region. None of the known prehistoric sites are particularly unusual or rare within the region of comparison. While the examples of the known prehistoric sites do indeed seem typical, or exemplary, of their site types, one cannot argue that they are "especially good examples" of their types owing to a present lack of quantitative data at the present time. Cultural, or prehistoric archaeology, is therefore not an ORV.

Historic

Evaluation of the Present Situation:

Birch Creek is of interest in the regional history of eastern Interior Alaska because of its association with a pre-Klondike gold rush. Gold miners first prospected in the area in the early 1890s, and the first economically viable gold discovery was made at Pitka's Bar in 1893 by Pitka Pavaloff and Sergei Cherosky, two miners of mixed Russian-Athabascan descent. The following year saw a rush or stampede up the creek when about 100 other men descended in the area. The creek and associated supply town on the Yukon River, Circle City, was virtually emptied of miners following the 1896 Klondike gold discovery further up the Yukon River in Canada. Mining would resume along tributaries of Birch Creek and in surrounding areas in the years following the Klondike strike, and continues through to the present day.

There are about 21 historic-era sites known within or immediately adjacent to the corridor. Of these, five have eroded away with no or very little remaining evidence of their existence. Three others have been built and occupied within the last 50 years, including one framed building covered with corrugated sheet metal that was occupied seasonally nearly every year from 1959-1993. The remaining 13 are spruce log cabin sites, often with an assortment of outbuildings (e.g., doghouses, caches, trash dumps). All but one of these are collapsing, the sole exception a refurbished cabin that was likely originally constructed in the 1920s to 1930s. Based upon artifacts, some historic documentation, and writings on the walls, these 13 sites date variably from the early 1900s through the 1970s or 1980s. Sites with evidence of a post-1959 occupation had further evidence of earlier occupations; they were apparently refurbished and reused in later times. The remaining cabin ruin sites were all mining and prospecting or trapping related, based on historical documentation, artifacts or features at the sites, or comparison to known cabins in the comparative region. One of the sites that has eroded away was an early 20th century roadhouse, and another was the purported site of a historic Athabascan village.

Of the 13 sites that have components older than 50 years and that have not eroded away, none have been evaluated for eligibility to the National Register of Historic Places. Field notes indicate, however, that most if not all of these sites have undisturbed cultural deposits, which along with other variables, may make them eligible to the Register.

As most historic-era sites leave at least some type of surface presence, it is likely that most cabin ruins or above-ground structure ruins have been identified inside the corridor. Any undiscovered ruin sites will most likely represent more examples of the types already found; that is, 20th century mining and trapping related sites. Other historic site types that are probable along Birch Creek but have not been discovered are those that leave more ephemeral traces, such as graves, mining prospect and other types of sub-surface pits, and short-term camps that do not involve permanent buildings (e.g., hunting camps; prospect camps). Examples of rare historic sites that may be present in the corridor, and that would likely contribute to history being an outstanding remarkable value in any future reevaluation of Birch Creek, include (1) definitive pre-Klondike era historic mining/prospecting sites, and (2) any early historic or protohistoric Alaska Native sites typifying traditional land use or subsistence practices.

Finding:

The historic traces found inside the Birch Creek corridor are typical of this and many other river settings in the region. None of the known historic sites are particularly unusual or rare within the region of comparison. The known historic sites seem typical, or exemplary, of their site types, of which there are hundreds more known scattered throughout the region of comparison, both on BLM and non-BLM lands. Taken alone, the historic sites found inside the Birch Creek corridor that are exemplary of mining and prospecting and trapping enterprises do not constitute an ORV.

Conclusion:

The scenic, recreation, and fish values of Birch Creek WSR are determined to be outstanding remarkable.

E.2.2. Outstanding Remarkable Values for Beaver Creek

Of the 127 miles of the designated Beaver Creek WSR, the initial 111 mile segment flows through the White Mountains National Recreation Area, an area established in ANILCA and managed by the BLM to provide for public outdoor recreation use and enjoyment and for the conservation of the scenic, scientific, historic, fish and wildlife and other values contributing to public enjoyment of such area. The final 16 mile segment flows the Yukon Flats National Wildlife Refuge, administered by the U.S. Fish and Wildlife Service.

Historical Review Beaver Creek

The Beaver Creek National Wild River Final Environmental Statement. This document was prepared by the Alaska Planning Group of the U.S. Department of the Interior, 1973 (DOI 1973a), and addressed the impact of designating a portion of Beaver Creek as a component of the NWSR. Specific values of the river were discussed in the section called "Description of the Environment," however no formal determination of ORVs was completed. The document reviewed 135 miles of the 303 mile-long Beaver Creek.

Pertinent statements on the values of the river in the Environmental Impact Statement include:

- “The overall landscape of the White Mountains area has been identified as superior or unique in a statewide scenery evaluation by the staff of the joint Federal-State Land Use Planning Commission.” (page 24)
- “The intersection [of two great structural trends] and accompanying fault zones associated with the Beaver Creek area produce a very complex geological area.” (page 25)
- The lower 2.5 miles of Fossil Creek “has been identified by the BLM as a ‘Geological Display Area’—compact areas where significant periods of geologic history are presented or other important geologic processes are vividly portrayed.” (page 28)
- “In addition to esthetic and wildlife values, the natural vegetation in the Beaver Creek area is extremely important in maintaining water quality and a stable watershed.” (page 33-35)
- “Fishing for Arctic grayling is considered excellent and attracts fly-in fishermen. The grayling fishery also attracts snowmobilers into the river area near ‘Big Bend’ where waters remain open because of springs.” The document also describes the grayling fishery as “high quality.” (page 35)
- “The mountain areas immediately adjacent to the proposed river segment have been identified by the Alaska Department of Fish and Game, in the publication, Alaska’s Wildlife and Habitat, January 1973, as important habitat areas for Dall sheep. The river valley is also listed as a significant winter concentration area for moose.” (page 35)
- “For the novice or intermediate canoeist, especially family or youth groups, the 135-mile segment of Beaver Creek included in the proposal offers an outstanding recreation opportunity. There are no rapids or serious obstacles.” (page 40)

Beaver Creek River Log. The U.S. Bureau of Outdoor Recreation conducted a field inspection of Beaver Creek in August 1976, consisting of a flow trip down the river. The following pertinent statements on the values of the river are included in the river log (BOR 1973).

- “The thick forested area and the clear waters of Beaver Creek combine with the White Mountains to create a beautiful scene for a float trip”.
- “Grayling fishing was excellent”. “Grayling fishing continued to be excellent.”
- “Good campsites continued to be plentiful and the scenery pleasing”.
- “It [Beaver Creek] and Nome Creek offered good Class I water on the International Water Scale.”
- “Scenery at the "Big Bend"...was superb. Hiking opportunities are excellent along the river in this area.”
- Rock outcroppings rise occasionally from the rivers edge in this section of the river [Fossil Creek] adding-to the scenery”.
- “...the view from the river-continued to be excellent of the White Mountains, paralleling forested hills, and rock outcroppings at the rivers edge”.
- “Scenery was excellent until we got several miles passed Victoria Creek where it was pleasing but without the sheer rock cliffs and the close mountains were not as grand as before.”
- “It’s scenery, grayling fishery and recreational opportunities are three of its outstanding features”.
- Numerous references to wildlife sighting including black bear, Dall sheep, moose, beaver, ducks eagles, and peregrine falcons, and wolf and lynx tracks.

Alaska National Interest Lands Conservation Act (ANILCA) December 1980. Congress established the Beaver Creek WSR in ANILCA Section 603 in which the Wild and Scenic River Act was amended to add the following paragraph:

“Beaver Creek, Alaska: The segment of the main stem from the vicinity of the confluence of the Bear and Champion Creeks downstream to its exit from the northeast corner of township 12 north, range 6 east, Fairbanks meridian within the White Mountains National recreational Area, and the Yukon Flats National Wildlife Refuge, to be administered by the Secretary of the Interior."

ANILCA designated Beaver Creek as a "wild" pursuant to the WSR Act. The values of the river were not discussed. ANILCA further directed the Secretary of the Interior to establish detailed boundaries and to prepare a management and development plan.

Beaver Creek River Management Plan. This document was prepared by the BLM and USFWS, December 1983. It determined the detailed boundaries for the river corridor and established a management and development plan. While values in the river corridor were discussed, ORVs were not determined. Pertinent statements on the values of the river in the River Management Plan include:

- "Scenic views from Beaver Creek are one of the region's most valuable recreational opportunities." (page 7)
- "Excellent opportunities for Arctic grayling fishing exist on Beaver Creek, primarily from river miles 20–100…." (page 7)

Findings for Beaver Creek

The following paragraphs evaluate the scenic, recreational, geologic, fish, wildlife, cultural, historic, and other values for Beaver Creek WSR. See section E.1 Overview of the Process for a description of BLM criteria used to interpret these values.

Scenic

Evaluation of Present Situation:

The Beaver Creek WSR Corridor lies within the Yukon-Tanana Uplands which has a scenic quality of "A" according to BLM's VRM process. See Appendix D Visual Resource Inventory.

Beaver Creek winds through the heart of the White Mountains with adjacent peaks averaging 2,000 to 5,000 feet in elevation. These exposed outcroppings of white limestone and other variegated bedrock form almost a continuous backdrop for the river and contrast with the diverse vegetation types. The overall length of the designated "wild" segment of Beaver Creek can be broken down into generally five separate distinct scenic reaches. The upper section between river mile 0 and 35 is characterized by the low rolling hills to the south and the higher rolling hills to the north. The river is flows gently and there are numerous gravel bars. Tall white spruce predominate the river corridor. Numerous wildfires have scarred the hillsides through the years and offer a beautiful mosaic of vegetative color and a dynamic look at the different successional stages of the vegetation as it reestablishes.

The second section begins at approximately mile 35, an area known as "Big Bend," where a significant limestone outcropping rises up abruptly nearly 1,200 feet in front of the river user. This massive uplift of jagged limestone is a well known landmark by local users and small plane pilots flying over the area. The distinct white exposed cliffs contrasting with the rolling hills. As implied by the name, Big Bend also marks a distinct change in direction for the river. As Beaver Creek flows around the tip of Big Bend it changes over 90 degrees from a westerly direction to a north-easterly direction. Continuing on to roughly mile 50, Beaver Creek flows primarily north through a relatively deep narrow valley with the steep ragged peaks of the White Mountains rising up on the east side. Long talus slopes with limestone outcrops and streaks of vegetation make for breathtaking vistas. Through the river remains a Class I (flatwater) float, large rocks become numerous at times and gravel bars tend to be a bit shorter.

Near river mile 50, Beaver Creek moves away from the main ridge of the White Mountains. This section to mile 80 opens up with rolling hills to the west and a more broad distant view to the White Mountains. The river speed decreases and white spruce no longer is the dominate vegetative type along the river. Cottonwood and poplar are more frequent as areas open with some groves of black spruce. The river has larger meanders with some sections breaking into multiple channels.

Between mile 80 and 110, Beaver Creek swings back to an easterly direction and the valley narrows. Tall rugged mountains rise to the north reaching 4,500 feet, and mountains encroach on the river from the south. Steep bluffs, some 200 feet high, are not uncommon. The river speed increases and there are fewer, shorter gravel bars.

In the last section, between mile 110 and 127, the river quickly begins to transition out into the Yukon Flats. After Victoria Mountain and Lime Peak, the broad, flat, horizon predominates. Although the terrain seems to flatten, the river maintains a good gradient with active gravel bars and quick turns.

Finding:

The change in elevation and topography of this river and the surrounding environment result in a highly diverse scenic and visual attraction. The back-and-forth transition from broad valleys with rolling hills and mountains to narrow valleys with steep rugged mountains; the transition between heavily forested and vegetated areas to areas where talus slopes and rocky outcroppings predominate; and the notable white limestone offer an ever changing visual quality. The small number of cabins found along the river blend with the landscape and are mostly hidden from view adding some variety and points of interest to the area. The variety of vegetation types and the seasonal colors are an exemplary example for Interior Alaska. The scenic value of Beaver Creek is found to be outstandingly remarkable.

Recreational

Evaluation of the Present Situation:

Beaver Creek offers outstanding recreational opportunities for non-motorized float-boat use for the novice or intermediate river floaters. Group sizes are generally small, two to four persons, and are comprised of persons originating from local, out-of-state, and international. Beaver Creek is one of the very few clearwater rivers in Alaska with some level of road access on an otherwise undisturbed river segment. Although the put-in is easily road accessible, the majority of users arrange a pickup from a small plane on a primitive, unmaintained, gravel bar airstrip near Victoria Creek. For those users who choose to float out to the next and only road accessible point, the Yukon River bridge, this may offer the longest road to road float opportunity in the nation, a distance of approximately 365 miles. Floaters experience solitude, closeness with nature and wildlife, escape from personal pressures, everyday demands of life and crowds, and exploration of new areas. Almost every book or website with information about floating Alaskan rivers includes information about floating Beaver Creek.

Beaver Creek is recognized for providing recreational users the opportunity for a truly wilderness type experience in a scenically diverse river setting. Along with the high scenic qualities, Beaver Creek offers outstanding sight-seeing, photographic, fishing and wildlife viewing opportunities.

A healthy and voracious population of Arctic grayling inhabits the river and few groups of users float the river without at least one meal of fish. Moose, bear, and Dall sheep sightings along the river are common. Wolf sightings occur occasionally. Moose hunting season brings the greatest concentration of users to the river. From the last week of August through mid-September, an estimated 15–20 groups of hunters take to the river. In contrast to non-hunting river users, hunters tend to lengthen their time on the river by spending multiple nights at the same campsite or spending time looking over particular areas. Hunters on Beaver Creek also tend to use a greater variety of gravel bars to fly out of and return from their trip.

Finding:

Beaver Creek is recognized regionally, nationally and internationally as truly wilderness type experience on an easy Class I river. The rivers setting within the heart of the White Mountains presents outstanding scenic and geological opportunities which are unique within the region. The presence of diverse wildlife and the possibility of seeing them in a natural setting enhance the experience. The recreational value of Beaver Creek is found to be outstandingly remarkable.

Geologic

Evaluation of the Present Situation:

In its upper reaches, Beaver Creek WSR flows around a prominent ridge of Early Silurian white Tolovana Limestone, for which the White Mountains were named. The Tolovana Limestone along the river weathers into distinctive crags and cliffs that are home to numerous rare plant species. The Tolovana Limestone includes karst (limestone dissolution) features such as caves, natural arches, sinkholes, cold springs, and underground streams that, in Alaska, have been widely documented only in the Southeast. Development of karst features in high-latitude locations is thought to be impeded by seasonal freezing of near-surface groundwater or by destruction during periods of glaciation (Jennings 1983). The White Mountains represent one of the few recorded locations of such features in northern or western Alaska (ADF&G 2006). The Ordovician Fossil Creek Volcanics underlying the limestone are a productive source of fossils.

The Serpentine Slide Research Natural Area, located partly within the river corridor, contains a notable outcrop of serpentine, an unusual iron- and magnesium-rich rock thought to originate at seafloor spreading centers.

Beaver Creek's usually clear water is characteristic of certain Interior rivers that, unlike most rivers in the state, drain terrain that did not experience extensive continental and/or alpine glaciation. Active rockfalls, a large landslide (Serpentine Slide), and thawing permafrost along the river provide opportunities to observe dynamic and ongoing geologic processes typical of an Interior river.

Finding:

Beaver Creek's limestone outcrops and associated karst features, as well as Serpentine Slide, represent geologic features that are rare and unusual in the geographic region. The geologic value of Beaver Creek is found to be outstandingly remarkable.

Fish Populations and Habitat

Evaluation of the Present Situation:

Beaver Creek is a highly productive river system known to support up to 10 species of fish including populations of Chinook, summer chum, and coho salmon.

Chinook: Beaver Creek Chinook salmon were designated a BLM Alaska sensitive species in 2004 due to a downward trend of this small population of Chinook salmon. The BLM monitored Beaver Creek Chinook salmon escapement from 1996–2000 and the data revealed a declining trend similar to the overall decline of Yukon River Chinook salmon. Various environmental factors make it difficult at best to gather population data for Beaver Creek Chinook salmon and therefore the relative health of Beaver Creek Chinook salmon may be assessed to some extent by the health of Yukon River Chinook salmon which are still experiencing below average returns (Volk et al. 2009). Beaver Creek and a few of its tributaries including Victoria, Ophir, and Nome Creek are known to provide critical spawning and rearing habitat for Chinook salmon. Beaver Creek Chinook were reclassified from a BLM Alaska sensitive species to a BLM Alaska Watch List species in 2010.

Other salmon species: Beaver Creek also supports small but viable populations of summer chum and coho salmon.

Resident species: The river is known for its healthy populations of Arctic grayling and northern pike which provide excellent sport fishing opportunities for recreational anglers floating Beaver Creek. Beaver Creek also supports populations of round whitefish, sheefish, least cisco, burbot, slimy sculpin, and blackfish.

Habitat: The river provides exceptionally high quality habitat for fish species indigenous to the region. This high quality habitat includes, but is not limited to, crucial spawning and rearing areas for 3 species of salmon.

A lack of major land-disturbing activities (some tributaries previously placer mined) in the watershed contribute to the near natural habitat conditions found in Beaver Creek. This pristine habitat supports one of the most diverse fisheries for both anadromous and resident species in the region.

Finding:

Beaver Creek contains a BLM Alaska watch list species (Chinook salmon) and fisheries diversity is one of highest in the region. Unique concentrations of Arctic grayling are highly important for recreational fishing. The near pristine aquatic habitat in Beaver Creek provides crucial spawning and rearing habitat for the survival and recovery of Chinook salmon. The populations of regionally significant fish species and the river's pristine habitat combine to a finding that fisheries is an outstanding remarkable value for Beaver Creek.

Wildlife Populations and Habitat

Evaluation of the Present Situation:

Dall sheep are uncommon inhabitants of Interior Alaska outside of the major Alaska Range and Brooks Range mountains, occurring only in small, scattered populations in the Yukon-Tanana Uplands and along the border with Canada in the Ogilvie Mountains. Beaver Creek lies at the westward limit of Dall sheep in central Interior Alaska; the White Mountains Dall sheep population centers on and occurs primarily within the Beaver Creek Drainage. In this region of generally rounded terrain, Dall sheep inhabit small scattered areas of rugged topography which provides escape terrain. The limestone outcroppings near Beaver Creek provide a unique, low-elevation habitat—extensive rocky terrain below elevational treeline. The river has exposed mineral deposits used as licks by Dall sheep in four locations along Beaver Creek and created bluff or cliff habitats used by sheep while visiting the licks. A high proportion of two nearby sheep sub-populations travel through areas with little or no escape terrain (such as tussock tundra) to visit these licks.

A full complement of Interior Alaska wildlife species occur along Beaver Creek in natural levels of abundance and in a natural setting. Abundant grayling in Beaver Creek support numerous river otters. BLM-sensitive species harlequin ducks and trumpeter swans occur on the river. Bald eagles nest in balsam poplar trees and peregrine falcons (a BLM Alaska sensitive species and federally endangered at the time of river designation) nest on river bluffs or limestone outcroppings, along with a diversity of other raptors. The riparian areas are important moose habitat (especially in late winter or deep snow conditions) and the river receives its greatest use during moose hunting season. Grizzly bears use the river more heavily during salmon runs and black bears are common along the lower river. The White Mountains caribou herd uses the river corridor (as did the Fortymile herd historically) and caribou are sometimes observed crossing Beaver Creek. River habitats in Alaska are typically highly diverse; the presence within the Beaver Creek WSR Corridor of a range of habitats from broad river floodplain wetlands to steep alpine tundra and barren ridges increases that diversity.

Finding:

The wildlife value of Beaver Creek can be considered an ORV of at least regional significance. It provides important and unique habitat for an atypical Dall sheep population. This wildlife population, in combination with others, provides a highly diverse assemblage of wildlife in a state of natural abundance.

Cultural

Evaluation of the Present Situation:

There are no known cultural or prehistoric sites in the river corridor.

An evaluation of other rivers in the region of comparison with similar topographic settings and riverine resources indicates that prehistoric sites that are likely to be found include late prehistoric short-term campsites and overlook hunting sites, neither of which would be considered rare in the region. Examples of such prehistoric sites that may be considered rare in the region, and thus may contribute to any future re-evaluation of Beaver Creek cultural or prehistoric outstanding remarkable values, would be caribou drive line and butchery sites, permanent or winter village sites, and fisheries (e.g., salmon) extraction and processing sites.

Finding:

At present, cultural or prehistoric archaeology is not an ORV.

Historic

Evaluation of the Present Situation:

There are about 14 historic-era sites known within or immediately adjacent to the corridor. Of these, four cabin sites have since eroded away with no or very little remaining evidence of their existence, and one other was burnt over by a wildland fire likely in the 1990s and cannot be relocated. One other is a stilt cache site apparently without an accompanying permanent cabin, which unfortunately had no datable refuse in the vicinity. A 1920s-era site has a separate large, collapsing log cabin some 22 meters away that was built with the aid of a chainsaw and appears to date within the last 50 years. The remaining eight historic sites are spruce log cabin sites, only one of which is accompanied by a cache. All but one of these eight are collapsing, the sole exception a refurbished cabin still occupied today that was likely originally constructed pre-World War II, based upon degree of weathering of the wall logs. The artifacts accompanying these eight sites all date to the 1920s to 1940s. Most of the sites, even those that have since eroded or burned away, are smaller cabins with features and artifacts that indicate a trapping enterprise. Only a few of the sites are, or were, larger cabins with gable roofs, more typical of those found associated with miners elsewhere in the region of comparison. These larger cabins might also represent home base trapping cabins from which forays were made to smaller, temporary trapping line cabins.

Of the eight sites that have components older than 50 years and that have not eroded away, none have been evaluated for eligibility to the National Register of Historic Places. Field notes indicate, however, that most of these sites have undisturbed cultural deposits, which along with other variables, may make them eligible to the Register.

As most historic-era sites leave at least some type of surface presence, it is likely that most cabin ruins or above-ground structure ruins have been identified inside the corridor. Any undiscovered ruin sites will most likely represent more examples of the type already found; that is, 1920s–1940s-era trapping cabins. It is also known that a portion of the historic Fairbanks-Beaver sled trail passed along a portion of Beaver Creek that is inside the WSR corridor considered here. The trail was built and maintained by the Alaska Road Commission in the early-mid 20th century. Traces of this historic trail, as evinced by a thin cut swath through the boreal forest, are seen today, as the trail intersects the corridor in the vicinity of Big Bend, and paralleling along the creek as it proceeds downstream, before crossing over the divide into upper Victoria Creek. This trail has not been evaluated for eligibility to the National Register. Historic maps indicate two Alaska Road Commission shelter cabins along this stretch of the trail. Neither of these two cabin ruins, if they still exist, has been identified on the ground. Regardless, dozens of similar shelter cabins exist elsewhere within the region of comparison.

With further intensive archaeological survey, other historic site types that can probably be found along Beaver Creek, but have not been discovered, are those that leave more ephemeral traces, such as graves, mining prospect and other types of sub-surface pits, and short-term camps that did not include permanent buildings. Examples of rare historic sites that may be present in the corridor, and that would likely contribute to history being an ORV in any future re-evaluation of Beaver Creek, include (1) definitive pre-Klondike era historic mining/prospecting sites, and (2) any early historic or protohistoric Alaska Native sites typifying traditional land use or subsistence practices.

Finding:

The historic traces found inside the Beaver Creek WSR Corridor (i.e., trapping, Alaska Road Commission sled trail) are typical of this and many other river settings in the region. None of the known historic sites are particularly unusual or rare within the region of comparison. The known historic sites inside the corridor are typical of their site types, of which there are many more known scattered throughout the region of comparison, both on BLM and non-BLM lands. The historic sites found inside the Beaver Creek corridor do not constitute an ORV.

Conclusion:

The scenic, recreation, geologic, fish, and wildlife values of Beaver Creek WSR are determined to be outstandingly remarkable.

E.2.3. Outstandingly Remarkable Values for the Fortymile River

The Fortymile WSR consists of the main stem of the Fortymile River and its major tributaries. River segments are classified as either "wild," "scenic" or "recreational." Classification is a determination based on existing characteristics of a river area resulting from human-caused change or levels of development. Congress mandated that those segments be managed according to the following objectives:

- Wild rivers will "be free of impoundments and generally inaccessible except by trail with watersheds or shorelines primitive, and waters unpolluted. These represent the vestiges of primitive America."
- Scenic rivers will be managed to be "free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads."
- Recreational rivers will be managed to be "readily accessible by road or railroad" and "may have some development along their shorelines, and…may have undergone some impoundment or diversion in the past."

The Fortymile River WSR segments, start and end points, and classification are presented below.

Class	Segment	Start Upstream	End Downstream	Miles
"wild"	Champion Creek	FM, T. 4S., R. 30E., Sec. 1	Confluence with North Fork	28
"wild"	Joseph Creek	FM, T. 5S., R. 21E., Sec. 33, headwaters	Confluence with Middle Fork	22
"wild"	Middle Fork	Confluence with Joseph Creek	Confluence with North Fork	42
"wild"	Mosquito Fork	Confluence with Kechumstuk Creek	Confluence with Ingle Creek	30
"wild"	North Fork	Confluence with Slate and Independence Creeks	Confluence with Main Stem and South Fork	57
"scenic"	Mosquito Fork	Confluence with Ingle Creek	Confluence with Dennison and South Forks	8
"scenic"	Dennison Fork	Confluence with West Fork of Dennison Fork	Confluence with South and Mosquito Forks	19
"scenic"	Dennison Fork (West Fork)	Confluence with Logging Cabin Creek	Confluence with Dennison Fork	13
"scenic"	Fortymile River (Main Stem)	Confluence with North and South Forks	Alaska-Yukon Territory border	39
"scenic"	Franklin Creek	CRM, T. 28N., R. 17E., Sec. 31; CRM, T. 28N., R. 18E., Sec. 36, headwaters	Confluence with South Fork	6
"scenic"	Hutchinson Creek	FM, T. 7S., R. 28E., Sec. 31, headwaters	Confluence with North Fork	19
"scenic"	Logging Cabin Creek	CRM, T. 22N., R. 16E., Sec. 11, headwaters	Confluence with West Fork of Dennison Creek	17
"scenic"	Napoleon Creek	CRM, T. 27N., R. 19E., Sec. 1, headwaters	Confluence with South Fork	7
"scenic"	O'Brien Creek	Confluence with King Solomon Creek and Liberty Fork	Confluence with Main Stem	27
"scenic"	South Fork	Confluence with Mosquito and Dennison Forks	Confluence with North Fork and Main Stem	27
"scenic"	Uhler Creek	FM, T. 8S., R. 31W., Sec. 24, headwaters	Confluence with South Fork	9

Class	Segment	Start Upstream	End Downstream	Miles
"scenic"	Walker Fork	Downstream of Liberty Creek	Confluence with South Fork	12
"recreational"	Wade Creek	Confluence of Grace and Warner Creek, CRM, T. 28N., R. 20E., Sec. 26	Confluence with Walker Fork	10

Historical Review Fortymile River

Fortymile River Trip Log. In 1967, BLM and ADF&G staff floated the Fortymile River from the Mosquito Fork down to the Yukon River (BLM 1967). The trip log does not note any specific values for the Fortymile River.

The Fortymile National Wild and Scenic River Final Environmental Statement . This document was prepared by the Alaska Planning Group of the U.S. Department of the Interior in 1973 (DOI 1973b). It proposed and evaluated adding 392 miles of the more than 1,000 miles of the Fortymile River and its principal tributaries together with 320,000 acres of land comprising the immediate environment of the rivers to the NWSR. Specific values of the river were discussed in the section "Description of the Environment," however no formal determination of ORVs was completed.

Pertinent statements on the values of the Fortymile River in the Environmental Statement include:

- "The Fortymile River basin is the location of several events and items having historical and cultural importance. These include the site of the first gold discovered in Interior Alaska; cabins, settlements, and equipment associated with past and present gold mining; the abandoned Eagle to Valdez military telegraph line which is today part of the Washington-Alaska Military Cable and Telegraph System. Two segments of this system in the Fortymile River basin, Joseph Creek to Kechumstuk and Eagle to Kechumstuk, are being considered for nomination by the State to the National Register of Historic Places in accordance with provisions of the National Historic Preservation Act of 1966 (80 Stat. 915)." (page 33)
- "Glistening vertical rock strata in an otherwise forested valley form especially scenic vistas in the vicinity of the confluence of the Middle Fork with the North Fork. The lower portion of the North Fork is deeply entrenched with bluffs up to 400 feet high rising from the river's edge." (page 48)
- In reference to the South Fork and Fortymile River: "The steep, bare outcrops of bedrock flanking the riverbed are noteworthy—a shining, glacier-like exposure of white marble downstream from the confluence of the North and South Forks; and colorful banded strata near O'Brien Creek." (page 50)
- In reference to the South Fork and Fortymile River: "A distinctive feature of the river area in that segment is the presence of past and present gold mining activities and contains several sites which may be of historic significance." (page 50)
- "Grayling appear to constitute the majority of the sports catch. Fishing in the Fortymile drainage is considered fair to excellent." (page 68)
- "Because the upper Yukon River is a northward extension of the Great Plains and is also on the fringe of coastal areas, there is a mixture of bird life in the Fortymile River basin not typical of Interior Alaska." (page 69)

A Proposal for Protection of Eleven Alaskan Rivers, Final Environmental Statement (DOI, Heritage Conservation and Recreation Service 1980). This statement evaluates the impact of protecting the natural environment within a four-mile corridor along eleven rivers in Alaska, including the Fortymile River and major tributaries. No specific values were noted for the proposed Fortymile River segments.

Fortymile Management Framework Plan (BLM 1980). This plan addresses the management of a large area, including the Fortymile WSR Corridor. No specific values were noted for the proposed Fortymile River segments.

Alaska National Interest Lands Conservation Act (ANILCA) December 1980. Congress established the Fortymile Wild and Scenic River in Section 603 of ANILCA in which the WSR Act was amended to add the following paragraph: "(48) FORTYMILE, ALASKA.—The main stem within the State of Alaska; O'Brien Creek; South Fork; Napoleon Creek. Franklin Creek, Uhler Creek, Walker Fork downstream from the confluence of Liberty Creek; Wade Creek; Mosquito Fork downstream from the vicinity of Kechumstuk; West Fork Dennison Fork downstream from the confluence of Logging Cabin Creek; Dennison Fork downstream from the confluence of West Fork Dennison Fork; Logging Cabin Creek; North Fork; Hutchison Creek; Champion Creek; the Middle Fork downstream from the confluence of Joseph Creek; and Joseph Creek; to be administered by the Secretary of the Interior."

The values of the river were not discussed. ANILCA further directed the Secretary of the Interior to establish detailed boundaries and to prepare a management and development plan.

Fortymile River Management Plan. This document was prepared by the BLM and published December 1983. This document determined the detailed boundaries for the river corridor and established a management and development plan. While values in the river corridor were discussed, ORVs were not determined.

Pertinent statements on the values of the river in the Fortymile River Management Plan include:

- In reference to the Middle Fork below Joseph Creek: "The water quality is excellent and this section represents a truly wild river. Numerous class II rapids challenge the boater and outstanding scenic views, particularly to the south, are a feature of this section." (page 8)
- "Glistening folded rock strata in an otherwise forested valley form especially scenic vistas in the vicinity of the two forks' [North Fork and Middle Fork] confluence." (page 9)
- "The Kink, located on the North Fork at mile 34.5, is a unique area in the Fortymile drainage. In 1898 a group of Danish prospectors blasted away a 100-foot rock ridge, draining a 2.8-mile long meander. The dry bed was worked for gold but proved to be poor ground, and was abandoned by 1905. While appearing an easy task to compete with today's technology, the Kink was a major engineering feat in that time and place. It was accomplished in a relatively uncharted wilderness without benefit of any developed transportation or communication system. The area is now on the National Register of Historic Places." (page 9)
- In reference to the lakes in the old river channel of the Kink: "These lakes are not typical of this section of the Fortymile; and, combined with the remote location, provide excellent wildlife habitat. The birdlife is particularly noticeable, with abundant waterfowl…. Peregrine falcons, and endangered species, nest in the area." (page 9)
- "The high rock walls, rushing whitewater and somber spruce forests make the Kink a memorable stop on a float trip…. The Kink remains a significant historic, recreation and ecological resource of the Fortymile." (page 9)
- In reference to Mosquito Fork, downstream 3 miles from the upper reaches of the designated river: "This section is quite remote, with little summer use, offering excellent opportunities for a primitive experience." (page 10)

- In reference to Joseph Creek: "It is probably the area of the wild, scenic and recreational corridor that is most accurately a vestige of primitive America." (page 11)

Findings for the Fortymile River

The following paragraphs evaluate the scenic, recreational, geologic, fish, wildlife, cultural, historic, and other values for the Fortymile WSR. See section E.1 Overview of the Process for a description of BLM criteria used to interpret these values.

Scenic

Evaluation of Present Situation:

The Fortymile WSR lies within the Yukon-Tanana Uplands which has a scenic quality of "A" according to BLM's VRM process. See Appendix D Visual Resource Inventory.

The Fortymile WSR uplands are characterized by appreciable topographic relief with the lowest area at approximately 1,100 feet elevation and the highest mountains between 5,000 to 6,200 feet elevation with a local relief of about 2,000 feet or greater. Terraced uplands, prominent peaks and rolling hills provide unique backdrops for many river segments.

The Mosquito Fork and the Dennison Fork flow clear water with extensive gravel and sand bars through wide river valleys with relatively low stream gradients. Relatively uniform gently rolling hills and ridges provide the backdrop to the shallow streams with small rapids and occasional pools. Ice lenses occur along the drainages providing unique opportunities to see permafrost and thermokarst formations creating contrast with the adjacent vegetated landscape, gravel bars and rock cliffs. Vegetation characteristics vary from muskeg marshes to alpine tundra. Attractive homogenous spruce forests, mixed with muskeg and mixed deciduous forests provide ever-changing stream side color and texture contrasts. These range from low mat herbaceous and shrubby plants to closed spruce-hardwood forests with black spruce and tall shrub, to more open hardwood forests with birch, aspen and associated shrub understory. Many areas show various stages of growth after wildland fires creating a stunning contrast of colors. The variety of plant communities, with different species characteristics, create a mosaic in line, color, form and texture which changes along each segment of the river system.

The headwater areas of the North Fork, Champion Creek, Joseph Creek, O'Brien Creek, Walker Fork, West Fork and Logging Cabin Creek are characterized as meandering streams that are incised in canyons with steep stream gradients. Exposed rock surfaces offer contrast with the water and surrounding vegetation from muskeg marshes to alpine tundra. Attractive spruce forests, contrast with muskeg and mixed deciduous forests provide ever-changing stream side color and texture changes. These range from low mat herbaceous and shrubby plants to forests and tall shrub. The variety of plant communities with different species characteristics create a mosaic in line, color, form and texture which changes along each segment of the river system. High rugged or terraced mountains serve as a backdrop for many of these segments.

Other segments like those along the Middle Fork, Lower North Fork, Main Stem and South Fork are characterized by deeply entrenched canyons with cut bedrock on most of their riffles interspersed in broader valleys. The average stream gradient is moderately steep but numerous small rapids formed from exposed bedrock and boulders. Larger rapids, such as the Kink, Bald Eagle, the Chute, the Falls, Claghorn and Deadman's Riffle offer challenge for float boaters and outstanding scenic views. Glistening vertical rock strata, shining white marble and colorful banded bluffs up to 400 feet high, rise from the river's edge in places contrasting with water and vegetation, from muskeg and black spruce to open hardwood forests with tall shrub. Scour holes can be seen in some areas of exposed bedrock, such as the Chute, Kink and Falls. All of these features add diversity, interest and color to the landscape.

Findings:

The Fortymile River system's presentation of diverse geological and landform values from wide valleys, stretches of bedrock outcrops, sheer cliffs, and an entrenched river system is unique within the region. The diversity of plant communities with a variety of colors, hues and textures create contrast within itself and against adjacent landforms, geologic formations, and cultural modifications. Many of the cultural modifications blend with the landscape and add variety and points of interest to segments. The combination of geologic formations, the overall landforms and the variety of vegetation creates a mosaic of scenery that is unique on each segment and along the river system. The Middle Fork, North Fork, South Fork, Main Stem, O'Brien Creek and Walker Fork all exhibit variety, creating interest in a dramatically changing landscape as someone moves along these travel routes, resulting in an outstandingly remarkable scenic value. Though not common travel routes, Joseph Creek, Champion Creek, Mosquito Fork, West Fork, Dennison Fork, and Logging Cabin Creek also have outstandingly remarkable scenic values for the same reasons.

Recreational

Evaluation of the Present Situation:

The Fortymile WSR offers a wide range of recreation experiences in a spacious setting ranging from areas without substantial evidence of humans' activities to those areas where there may be substantial past and present activities. Ever changing vegetation and landforms offer outstanding scenery along this clear water river system.

A primitive, wildland experience is offered on a five to 10 day float trip from Joseph to the Fortymile bridge. This trip includes the Middle Fork, Lower North Fork and Main Stem. The North Fork from Slate Creek to the confluence with the Middle Fork offers a slightly different multi-day wildland, primitive experience. On either trip, floaters test their skills through a number of riffles and rapids in a remote area. Because of the system's spider web character, youthful nature and the presence of permafrost, rain induced rises in water levels can suddenly challenge floaters. A diversity of vegetative communities found along these river segments from muskeg marshes to alpine tundra provides a variety of colors and textures that enhance the overall visual quality of the recreation experience. Floaters experience solitude, a closeness with nature and a test of skills.

The West Fork float provides a shorter wildland experience with a more historical flavor for the less experienced or those seeking an easier family experience. This two to four day trip includes the West Fork, the Dennison Fork and the South Fork from the West Fork Highway bridge at Taylor Highway Mile 42 to the South Fork bridge. Past scars from wildland fires create a mosaic of color and texture from different stages of vegetative growth that adds to the experience. Floaters experience remoteness and a closeness with nature in a small group setting.

The South Fork trip offers a look into past and present mining activities on a three to five-day float or single day motorized boat trip with a few rapids for challenge. This trip includes the South Fork and the Main Stem from the South Fork bridge to the Fortymile River bridge. Floaters experience closeness with nature and a chance to explore history with family or friend groups.

The Main Stem downriver to Canada with a take-out at either Clinton Creek or Eagle via the Yukon River offers unique multi-day international float trips with many different aspects of interest. Diverse cliffs line sections of the river, past and present mining activities can be seen. Wildlife is not uncommon and a number of rapids and riffles challenge the floater. Because of the system's spider web character and the entrenched character of this segment, rain induced rises in water levels can also challenge the floater's skills. The clear water Main Stem contrasts with the glacier fed Yukon River adding a unique transition. River users experience closeness to nature, a connection to the past and a sense of isolation and independence.

Wade Creek offers an up close look at past and present mining activities. River actions over time deposited gold along ancient stream beds. These beds have been and are currently mined. Many visitors like to try their hand at panning for gold along this segment. The main experiences for visitors are learning about the past, exploring the area, and seeing new and different things.

The historic mining district with associated dredges, cabins, tools and equipment is an attraction to many river users, including current mining activities. An interest with the past is enhanced by comparing modern operations to historic operations. Many of the historic resources blend with the surrounding landscape and provide a sense of exploration for floaters on many section of the river. Historic hunting and trapping cabins sites dot the landscape while the historic Washington-Alaska Military Cable and Telegraph System (WAMCATS) line follows Champion Creek and the section of the North Fork between Champion Creek and the Middle Fork, where the line crosses the river before heading cross-country again. Short sections of WAMCATS may be found within the corridor along Hutchinson Creek and Mosquito Fork. The Kink and old communities such as Franklin, Jack Wade, and Steele Creek, offer a chance to explore the past, enhancing the recreationists experience of gold mining and life along the river. Past or current mining activities occur along the North Fork, South Fork, Mosquito Fork, Walker Fork, Wade Creek and the Main Stem. Old dredge parts and other signs or mining activities can still be seen along these segments.

Sport fishing for grayling is fair to moderate depending on past influences to the naturalness of the river. Popular segments include the Mosquito Fork, Walker Fork, West Fork and the South Fork. The Kink also attracts anglers on a remote float trip. The Fortymile River has a variety of wildlife including moose, caribou, wolves, black and grizzly bear, lynx, fox, peregrine falcon and other raptors, all may be seen while floating the river. Some areas of Mosquito and Dennison Forks provide nesting habitat for waterfowl. While these are not ORVs, fishing and wildlife viewing enhances the overall river experience for many recreationists.

The use of the area in general and site-specific locations such as Ketchumstuk and Joseph by native peoples and more recent use by miners and trappers enhance the overall experience of exploration, learning, and contemplating the human's relationship with the land.

Pleistocene fossils may be found along some segments including the South Fork and the Main Stem. Amateur rock hounds can find a number of different metamorphic, igneous and sedimentary rocks, which are readily visible in a variety of bedrock outcrops and cliff areas. These displays of bedrock and geological features provide a diversity of backdrops, enhancing the overall river experience for many recreationists.

Finding:

The Fortymile River system is recognized regionally and nationally as an accessible, fresh-water river system with interspersed whitewater and flat water areas providing a variety of multi-day floating and camping experiences that are considered unique. The river's presentation of diverse geological values with stretches of whitewater caused by bedrock outcrops, human manipulation of the landscape, and an entrenched river system; the mix of cultural and historic values including native and non-native use; the diverse wildlife viewing opportunities and the sheer size of the system is unique within the region. The diversity of vegetation types and landform enhance the river experience. The recreational values of the Middle Fork, Lower North Fork, South Fork and Main Stem, as well as West Fork, Dennison Fork, and Wade Creek are found to be outstandingly remarkable.

Geologic

Evaluation of the Present Situation:

The Fortymile River's geomorphology distinguishes it from most rivers in the Yukon-Tanana Uplands. The upper portion of the river, particularly the Dennison, Mosquito, and Middle Forks, flow sluggishly through relatively flat, wide valleys dotted with lakes, sloughs, and marshlands. In stark contrast, the lower portion is incised in deep valleys with steep-walled canyons cut into bedrock. The canyon slopes and rapids expose intensely folded metamorphic rocks.

Signs of the regional uplifting and fluvial downcutting that produced the deep canyons can be seen numerous places on the sides of the valleys, where gravel river terraces are perched up to 750 feet above the current river level (Pinney 2001). Examples of these terraces may be seen on the South Fork from the Taylor Highway and near Steele Creek along the Main Stem and South Fork segments. Walker Fork and O'Brien Creek segments illustrate downcutting.

In many places bluffs and rapids along the river expose folded Paleozoic metamorphic rocks that have been intruded by Tertiary to Mesozoic plutons and dikes (Foster 1976). Most prominent of these are steeply tilted beds of white marble interspersed with gneiss and schist. Examples of such locations include the Chute Rapids, the Kink Rapids, the bluffs at Long Bar and upstream of the Taylor Highway bridge by O'Brien Creek, and the Canyon Rapids, located along the North Fork and Main Stem segments.

Significant amounts of placer gold have been mined from the river and at least 10 of its tributaries since the late 19th century. The history of mining in the region is discussed in more detail in the section on the river's historical resources.

The Fortymile River's usually clear water is characteristic of Interior rivers that, unlike most rivers in the state, drain terrain that did not experience extensive continental and/or alpine glaciation.

Active rockfalls and landslides, many of them related to recent wildland fire, including thawing permafrost exposed by the river, provide opportunities to observe dynamic and ongoing geologic processes typical of an Interior river.

Finding:

For the most part, the Fortymile River region is characterized by geologic features that are neither rare nor unusual in the geographic region. However, the river's geomorphology — particularly its deeply incised valleys, entrenched meanders, and high gravel terraces — is regionally distinctive and has been described as "spectacular evidence of Pleistocene and (or) Holocene downcutting" (Foster 1969). The geologic value of the Fortymile River is found to be outstandingly remarkable along the North Fork downstream from its confluence with the Middle Fork (Lower North Fork), the Main Stem, the South Fork, the Walker Fork and O'Brien Creek.

Fish Populations and Habitat

Evaluation of the Present Situation:

The Fortymile River and its tributaries have a relatively low (less than five) diversity of fish species relative to the size of the basin.

Salmon species: The ADF&G states that, dating back to the 1960s, only 16 juvenile and two adult Chinook salmon, 16 adult chum salmon and one unidentified salmon have been observed by state, federal and private entities in the Alaskan portion of the Fortymile River (ADF&G 1999). Their conclusion is that anadromous fish runs in the Fortymile River are at the upper limit of their natural distribution and may not successfully reproduce on an annual basis partly due to marginal habitat.

Resident species: Arctic grayling are the dominant fish species in the basin but are not particularly abundant.

Habitat: The Fortymile River does not contain exceptionally high quality fish habitat. Placer mining began over one hundred years ago in the Fortymile River drainage and continues today. These activities have resulted in the reduction of available fish habitat within the drainage. Since pre-mining fisheries data are unavailable, the full extent to which mining activities have impacted fish populations in the Fortymile River basin is unknown (ADF&G 1987b). It is unknown whether mining activities adversely affected any outstanding and remarkable values for fish habitat that may have existed prior to mining.

Finding:

The Fortymile River does not contain outstanding and remarkable values for fish populations or fish habitat. At this time, there are no unique stocks or populations of State, federally listed, or candidate threatened and endangered fish species within the Fortymile River.

Wildlife Populations and Habitat

Evaluation of the Present Situation:

The Fortymile WSR supports a dense and increasing regionally important population of American peregrine falcon (*Falco peregrines anatum*). Peregrines in the Fortymile WSR nest on sheer cliff faces of up to 100 meters (109 yards), grassy bluffs broken by rock outcrops and small cliffs, and sloping, grassy bluffs that are treeless. In 2008 the distance between nest sites within the Fortymile Peregrine Falcon Monitoring Area was 3.9 river km (2.4 river miles). Densities of nests are higher in the Fortymile WSR than on the neighboring Upper Yukon and Upper Tanana rivers. The current occupancy rate of approximately 70 percent (number of Traditional Nesting Territories occupied) and the increase use of irregularly occupied territories indicates that the populations will continue to expand.

Finding:

Peregrine falcon are an outstandingly remarkable wildlife value of regional significance in the Fortymile WSR due to the high nest density and amount of available habitat providing opportunity for population increase. Even though peregrine nest throughout the river, segments with the greatest value for wildlife (peregrine falcon) are: 1) the Middle Fork, 2) the North Fork, 3) the South Fork, 4) Dennison Fork and 5) the Main Stem.

Cultural

Evaluation of the Present Situation:

There are very few known cultural, Native American, or prehistoric sites inside the river corridor (six percent of the total number of sites known). Nine of these sites are surface lithic sites associated with hunting lookout sites, one is a historic Native American burial site, and another is a buried seasonal camp site located at the confluence of Wade Creek and Walker Fork. Most of the area inside the corridor has not been surveyed intensively for prehistoric remains, and it is likely that more sites are present and will be found in the future. An evaluation of other rivers in the region with similar topographic settings and riverine resources indicates that Native American or prehistoric sites likely to be found include additional late prehistoric short-term campsites and overlook hunting sites neither of which would be considered rare in the region. Examples of sites that may be considered rare in the region, and thus may contribute to any future re-evaluation of Fortymile River drainage cultural or prehistoric ORVs, would be caribou drive line and butchery sites, permanent or winter village sites, and fisheries (e.g., salmon) extraction or processing sites.

Finding:

At present, cultural or prehistoric archaeology is not an ORV.

Historic

Evaluation of the Present Situation:

The Fortymile River is of interest in the history of Alaska, and of eastern Interior Alaska in particular, because of its association with the first gold rush stampede in Alaska. The strike, September 1886, in the vicinity of Franklin Creek along the South Fork of the Fortymile, was the first coarse gold discovery of gold on the Yukon River or any of its tributaries. From 1886 to 1893, the Fortymile drainage in Alaska was truly the only gold producing area in the entire Yukon basin, outside of a few, much smaller camps along the Upper Yukon in Canada. Subsequent discoveries along the Yukon and its tributaries in Canada and Alaska would expand the breadth of gold mining throughout most of central Interior Alaska. Prospectors quickly fanned out in the Fortymile area following the initial discovery, locating in succession what would be the major placer gold-bearing creeks in the drainage: South Fork/Franklin Bar (1886), main stem Fortymile (1886), Franklin Creek (1886 or 1887), Walker Fork (1888), Chicken Creek (early-1890s), Canyon Creek and tributaries (early-1890s), Dome Creek (1893), Napoleon Creek (1893), Wade Creek (1895), Lost Chicken Creek (1895-96), Ingle Creek (late-1890s), Uhler Creek (early-1900s), and Buckskin Creek (early-1900s).

In response to this increased and sustained development, the Fortymile drainage in Alaska developed a series of small communities by the late-19th and early-20th centuries to meet the transportation and supply needs of the developing population at Franklin, Jack Wade, Chicken, Steele Creek, and Liberty. Much of the mining population of the Fortymile would empty back into Canada during the huge stampede following the 1896 discovery of gold up the Klondike River, only to drift back again over the next few years following the subsequent demographic saturation of that area. The Fortymile has seen near-continuous placer gold mining since its date of discovery up to the present time.

In terms of the physical remains of these activities, about 170 historic sites are present within the confines of the Fortymile WSR Corridor, the vast majority of them related to mining during the late-19th and first half of the 20th centuries. They cover all manner of site types, including historic trails, portions of the WAMCATS along with buildings and structures associated with that system, gold dredges and associated camps, miners' log cabins and adjacent worked ground, small abandoned communities, isolated boilers and other large mining equipment, trappers' log cabins, woodchoppers' cabins, airstrips, roadhouses, and several cemeteries and isolated graves.

Of particular note, the following abandoned communities are located on BLM-managed lands inside the corridor: Steele Creek, along the main stem Fortymile River; Franklin, at the mouth of Franklin Creek on the South Fork; and Jack Wade, along Wade Creek. Also, two sites inside the corridor are currently on the National Register of Historic Places: (1) the Kink, a cultural channel blasted through a ridge of land by miners on the North Fork in the early-20th century to divert the river for placer operations, and (2) the Steele Creek Roadhouse, a log building on the main stem of the Fortymile River built to provide shelter for travelers and to supply the local mining population. Other sites have also been found eligible to be nominated to the Register through consultation with the State Historic Preservation Office, but have not been through the formal nomination process. There is also an intact portion of the WAMCATS telegraph line, built by the Army's Signal Corps between 1900–1904, found down Champion Creek to its mouth, and from there down a portion of the North Fork, including tripods that held up the wire cross-country, and several telegraph posts and stations.

Not surprisingly, the greatest numbers of sites in the corridor are located on the creeks that received the most attention from mining activities over the past 125 years. Those creeks that are part of the Fortymile Wild and Scenic River corridor that have the greatest density of such sites include the main stem Fortymile River, the South Fork, the North Fork, Napoleon Creek, Uhler Creek, and Wade Creek. Hutchinson Creek can be added to this list. Historically, Hutchinson itself did not contain large amounts of placer gold, but two of its tributaries did, Confederate and Montana creeks. As a result, Hutchinson itself has an outstanding quantity of historic mining sites along its length owing to the large amount of prospecting that occurred along it, and the fact that it was never disturbed by subsequent large-scale mining operations.

Finding:

The historic sites found inside the following portions of the Fortymile WSR Corridor have outstanding remarkable historical values: (1) the Main Stem, (2) the South Fork, (3) the North Fork, (4) Napoleon Creek, (5) Uhler Creek, (6) Wade Creek, (7) Hutchinson Creek, (8) Franklin Creek, and (9) Champion Creek.

Other Similar Values

Evaluation of the Present Situation:

The Fortymile River is the largest of the northerly flowing tributaries to the Yukon River in this area and drains about one-sixth of the Yukon-Tanana region. It is an international river with the lower 20 miles flowing easterly through the Yukon Territory, Canada, to its confluence with the Yukon River approximately midway between Dawson, Yukon Territory, and Eagle, Alaska. Water quality, chemistry and color characteristics of the Fortymile River and its tributaries are similar to those commonly found in other Interior Alaska rivers.

Finding:

Field observations by the interdisciplinary planning team and reviews of selected references support the finding that there are no ORVs associated with the hydrologic features of the Fortymile WSR Corridor.

Conclusion:

The ORVs for the Fortymile WSR are listed in the following table in alphabetical order by river segment.

Table E.4. Outstandingly Remarkable Values for the Fortymile River

Segment	Start Upstream	End Downstream	Outstandingly Remarkable Values
Champion Creek	FM, T. 4S., R. 30E., Sec. 1, headwaters	Confluence with North Fork	Scenic, Historic
Dennison Fork	Confluence with West Fork	Confluence with South and Mosquito Fork	Scenic, Recreation, Wildlife
Fortymile River (Main Stem)	Confluence with North and South Forks	Alaska-Yukon Territory Border	Scenic, Recreation, Geologic, Historic, Wildlife
Franklin Creek	CRM, T. 28N., R. 17E., Sec. 31; CRM, T. 28N., R. 18E., Sec. 36, headwaters	Confluence with West Fork	Historic
Hutchinson Creek	FM, T. 7S., R. 28E., Sec. 31, headwaters	Confluence with North Fork	Historic
Joseph Creek	FM, T. 5S., R. 21E., Sec 33, headwaters	Confluence with Middle Fork	Scenic
Logging Cabin Creek	CRM, T. 22N., R. 16E., Sec. 11, headwaters	Confluence with West Fork of Dennison Creek	Scenic
Napoleon Creek	CRM, T. 27N., R. 19E., Sec. 1, headwaters	Confluence with South Fork	Historic
Middle Fork	Confluence with Joseph Creek	Confluence with North Fork	Scenic, Recreation, Wildlife
Mosquito Fork	Confluence with Kechumstuk Creek	Confluence with Dennison Fork	Scenic
Upper North Fork	Confluence with Slate and Independence Creeks	Confluence with Middle Fork	Scenic, Historic, Wildlife
Lower North Fork	Confluence with Middle Fork	Confluence with Main Stem	Scenic, Recreation, Geologic, Historic, Wildlife
O'Brien Creek	Confluence with King Solomon Creek and Liberty Fork	Confluence with Main Stem	Scenic, Geologic
South Fork	Confluence with Mosquito and Dennison Forks	Confluence with North Fork and Main Stem	Scenic, Recreation, Geologic, Historic, Wildlife
Uhler Creek	FM, T. 8S., R. 31W., Sec. 24, headwaters	Confluence with South Fork	Historic
Wade Creek	Confluence with Grace and Warner Creeks	Confluence with Walker Fork	Recreation, Historic
Walker Fork	Downstream of Liberty Creek	Confluence with South Fork	Scenic, Geologic
West Fork	Confluence with Logging Cabin Creek	Confluence with Dennison Fork	Scenic, Recreation

Appendix F

Wilderness Characteristics Inventory

Appendix F. Wilderness Characteristics Inventory

F.1. Introduction

BLM's Land Use Planning Handbook H-1601-1 requires that the BLM identify decisions related to areas with wilderness characteristics. The Eastern Interior Field Office conducted an inventory to determine lands with wilderness characteristics in the Eastern Interior Planning Area (BLM 2011a). This appendix summarizes the methodology and results of the inventory, which is incorporated by reference into the RMP/EIS. Maps of inventory units are available in BLM’s Fairbanks District Office.

The policy allows for citizen’s to submit wilderness characteristics inventory. No citizen’s inventory was submitted for the Eastern Interior RMP.

F.1.1. Methodology

All BLM-managed lands addressed in the RMP/EIS were inventoried for wilderness characteristics following BLM Manual 6310. To be identified during the inventory process as having wilderness characteristics, lands must:

- Be a roadless area of sufficient size as to make practicable its preservation and use in an unimpaired condition;
- Generally appear to have been affected primarily by the forces of nature; and,
- Have outstanding opportunities for solitude, or a primitive and unconfined type of recreation.

The BLM used in-house expertise to assess whether or not specific lands possess wilderness characteristics. The BLM will also rely on public comments obtained on the Draft RMP/EIS to bring forth other sources of knowledge to potentially modify the inventory.

If the wilderness characteristics criteria listed above are met, the following facilities, activities and uses consistent with ANILCA may occur in areas having wilderness characteristics: public use cabins; administrative sites and visitor facilities; temporary facilities and equipment for hunting, fishing, and camping; airplane use and landings; and motorboat, snowmobile, and all-terrain motor vehicle use. The critical question to consider is not whether these facilities, activities or uses exist in the relevant tract, but whether they singly or in combination with other factors have altered the character of the land from one that “generally appears to have been affected primarily by the forces of nature” and precludes the land from having “outstanding opportunities for solitude and/or a primitive and unconfined type of recreation.” In general, substantial active or remnant evidence of mining or oil and gas extraction facilities, above-ground pipelines or powerlines, intensive recreational developments, and similar intrusions on the land may render such lands as inappropriate for identification in the inventory stage as having wilderness characteristics.

Within each of the four planning subunits (Fortymile, Steese, Upper Black River, and White Mountains), inventory units were identified, using known areas of significant disturbance as boundaries (such as roads, mining activity). In areas containing less significant disturbance, management boundaries (such as Special Recreation Management Areas, Wild and Scenic River Corridors, and land ownership boundaries) were used.

The first step was to determine if the inventory unit meet the 5,000 acre size criteria. Units of less than 5,000 acres could be considered if they meet one of the following exceptions:

- They are contiguous with lands which have been formally determined to have wilderness or potential wilderness values, or any federal lands managed for the protection of wilderness characteristics.
- It is demonstrated that the area is of sufficient size as to make practicable its preservation and use in an unimpaired condition.

If the inventory unit did not meet the size criteria no further evaluation was done. If the unit met the size criteria, then naturalness was considered.

To meet the naturalness criterion, human disturbance must be substantially unnoticeable and the area must retain its natural character. An area may include some human impacts if they are substantially unnoticeable in the area as a whole. Apparent naturalness refers to whether or not an area looks natural to the visitor who is not familiar with the biological composition of natural ecosystems.

If the inventory unit was found not to possess naturalness, no further evaluation was done. If the inventory unit was determined to possess naturalness, then opportunities for solitude or a primitive and unconfined type of recreation were evaluated. The area does not need to posses outstanding opportunities for both elements and does not need to have outstanding opportunities on every acre.

If it was determined that an area met the criteria of size, naturalness, and had either outstanding opportunities for solitude or Primitive recreation, it was concluded that the inventory unit possesses wilderness characteristics.

Supplemental values are ecological, geological, or other features of scientific, educational, scenic, or historical value. Supplemental values are not required to be present to classify an area as lands with wilderness characteristics, but their presence was documented and taken into account where they were known to exist in units determined to be have wilderness characteristics.

F.2. Results of Inventory

The following tables summarize wilderness characteristics inventory results for each planning subunit.

Table F.1. Fortymile Subunit Wilderness Characteristics Inventory Results

Unit Name and Number	Size (acres)	Meets size criteria	Is Natural	Solitude or Primitive Recreation	Special Values	Conclusion
South Fortymile, AKF020–143	855,464	Yes	Yes	Yes	Fortymile caribou calving and postcalving habitat	Has wilderness characteristics
Central Fortymile, AKF020--103	135,157	Yes	Yes	Yes	Fortymile caribou calving and postcalving habitat	Has wilderness characteristics
North Fortymile Area, AKF020–137	426,099	Yes	Yes	Yes	Fortymile caribou calving and postcalving habitat; ungulate mineral licks	Has wilderness characteristics
North Fortymile River, AKF020–138/139	129,728	Yes	Yes	Yes	Fortymile caribou calving and postcalving habitat	Has wilderness characteristics
East Fortymile, AKF020–111	69,215	Yes	Yes	Yes	None known	Has wilderness characteristics
Washington Creek, AKF020–170	43,296	Yes	Yes	Yes	None known	Has wilderness characteristics
Mosquito Fork, AKF020–134	20,296	Yes	Yes	Yes	Outstanding scenic and recreational values	Has wilderness characteristics
Dennison Fork Area, AKF020–108	17,058	Yes	Yes	Yes	Outstanding scenic and recreational values; peregrine nesting habitat	Has wilderness characteristics
Fortymile River, AKF020–120	28,049	Yes	Yes	Yes	Outstanding scenic, recreation, geologic, historic, and wildlife values	Has wilderness characteristics
South Fork Fortymile River, AKF020–143	48,857	Yes	Yes	Yes	Outstanding scenic, recreation, geologic, historic, and wildlife values	Has wilderness characteristics
Yukon-Charley Rivers Parcels, AKF020–123/172/173	6,130	Yes, contiguous with NPS	Yes	Yes	Fortymile caribou calving and postcalving habitat	Has wilderness characteristics
Fortymile Subunit Scattered Parcels[a]	255,600	Yes	Yes	Yes	Fortymile caribou calving and postcalving habitat	Has wilderness characteristics
Logging Cabin Creek (Upper and Lower), AKF020–130/132	6,300	Yes	No	N/A	N/A	No wilderness characteristics
Dome Creek (Upper and Lower), AKF020–165/131	1,684	Yes	No	N/A	N/A	No wilderness characteristics
Tetlin Area, AKF020–153	5,300	Yes	No	N/A	N/A	No wilderness characteristics

Unit Name and Number	Size (acres)	Meets size criteria	Is Natural	Solitude or Primitive Recreation	Special Values	Conclusion
Hutchinson Creek Mining Claims, AKF020–128	394	Yes	No	N/A	N/A	No wilderness characteristics
Walker Fork, AKF020–169	1,501	No	N/A	N/A	N/A	No wilderness characteristics
Wade Creek, AKF020–167	2,852	No	N/A	N/A	N/A	No wilderness characteristics
Fortymile Non-contiguous Parcels[b]	21,154	No	N/A	N/A	N/A	No wilderness characteristics
Fortymile Mining Claims[c]	1,785	No	No	N/A	N/A	No wilderness characteristics

[a] Includes the following inventory units: AKF020–100/112/124/125/127/142/171

[b] Includes the following inventory units: AKF020–101/102/105 to 107/109/110/113 to 119/126/129/133/140/141/145/224/147 to 152/154 to 163/166

[c] Inlcude the following inventory units: AKF020–104/121/122/136/144/164/168

Table F.2. Steese Subunit Wilderness Characteristics Inventory Results

Unit Name and Number	Size (acres)	Meets size criteria	Is Natural	Solitude or Primitive Recreation	Special Values	Conclusion
North Steese, AKF020–219	522,379	Yes	Yes	Yes	Mount Prindle RNA; ungulate mineral licks; Dall sheep habitat; Pinnell Mtn. Trail	Has wilderness characteristics
Wolf Creek, AKF020–233	496,803	Yes	Yes	Yes	Fortymile caribou calving and postcalving habitat; ungulate mineral licks; Big Windy Hot Springs RNA.	Has wilderness characteristics
Birch Creek, AKF020–202	87,400	Yes	Yes	Yes	Outstanding scenic, recreational and fisheries values	Has wilderness characteristics
North Birch Creek, AKF020–217	117,034	Yes	Yes	Yes	None known	Has wilderness characteristics
Circle Area Units, AKF020–202/203/212	40,060	Yes	Yes	Yes	None known	Has wilderness characteristics
Harrison Creek, AKF020–215	6,041	Yes	Yes	Yes	None known	Has wilderness characteristics
Harrison Creek Road, AKF020–216	514	No	No	N/A	N/A	No wilderness characteristics
Clums–Volcano Mines, AKF020–210	270	No	No	N/A	N/A	No wilderness characteristics
Bachelor Creek Mines, AKF020–201	137	No	No	N/A	N/A	No wilderness characteristics
Fryingpan Creek, AKF020–214	77	No	No	N/A	N/A	No wilderness characteristics
Fourteen Mile Creek -Yukon River South, AKF020–213	1,280	No	N/A	N/A	N/A	No wilderness characteristics
Steese Scattered Parcels and Mining Claims outside of the Steese National Conservation Area[a]	4,968	No	N/A	N/A	N/A	No wilderness characteristics

[a] Includes the following inventory units: AKF020–205 to 209/211/218/225 to 232

Table F.3. Upper Black River Subunit Wilderness Characteristics Inventory Results

Unit Name and Number	Size (acres)	Meets size criteria	Is Natural	Solitude or Primitive Recreation	Special Values	Conclusion
Black River, AKF020–300	2,230,888	Yes	Yes	Yes	Nesting bald eagles in Salmon Fork	Has wilderness characteristics
Upper Kevinjik Creek, AKF020–305	49,776	Yes	Yes	Yes	None known	Has wilderness characteristics
Black River Scattered Parcels, AKF020–301/303/304/306	76,918	Yes	Yes	Yes	None known	Has wilderness characteristics
East Central-Big Creek, AKF020–302	3,840	No	N/A	N/A	N/A	No wilderness characteristics

Table F.4. White Mountains Subunit Wilderness Characteristics Inventory Results

Unit Name and Number	Size (acres)	Meets size criteria	Is Natural	Solitude or Primitive Recreation	Special Values	Conclusion
White Mountains, AKF020–418	1,014,463	Yes	Yes	Yes	Outstanding scenic, geologic, recreational, fisheries and wildlife values on Beaver Creek; Dall sheep habitat; Limestone Jags, Mount Prindle and Serpentine Slide RNAs.	Has wilderness characteristics
Nome Creek Valley, AKF020–411/412/413/414/417	1,741	No	No	N/A	N/A	No wilderness characteristics
Recreation Withdrawals, AKF020–400/415/416	538	No	N/A	N/A	N/A	No wilderness characteristics
White Mountains Scattered Parcels and Mining Claims[a]	3,495	No	N/A	N/A	N/A	No wilderness characteristics
Wickersham Trailhead, AKF020–419	45	No	N/A	N/A	N/A	No wilderness characteristics

[a] Include the following inventory units: AKF020–401 to 410

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Appendix G

Land Tenure and Withdrawals

Appendix G. Land Tenure and Withdrawals

G.1. Land Tenure

During the land use planning process, the BLM identifies lands for either disposal or retention. Lands are to be retained in federal ownership unless it is determined that disposal of a particular parcel will serve the national interest (FLMPA section 102(a)(1)).

The BLM may dispose of lands through a variety of authorities, provided they meet the criteria in FLPMA. Disposal authorities include (1) exchanges and sales under FLPMA; and (2) transfers to other governmental units for public purposes.

Parcels identified as Zone 3 in this Proposed RMP/Final EIS are those that are potentially suitable for disposal through public land sales. Lands identified as Zone 2 are potentially suitable for exchange. Land exchanges are a common-sense tool that enables the Bureau of Land Management (BLM) and other landowners to improve land management, consolidate ownership, and protect environmentally sensitive areas. By exchanging public land that is isolated and difficult to manage, the BLM is able to acquire other lands with importance for recreation, wildlife, fisheries, wetlands, habitat for threatened and endangered species, wilderness, open space, scenic, cultural and other resource conservation purposes. Land exchange allows the BLM to reposition lands into more manageable units and to meet community expansion needs.

Even though land use plans identify lands for potential disposal, the BLM must still complete many procedural requirements before these lands can be for sale. These processes and legal requirements can be costly and time-consuming. In some cases, the process can result in a decision not to dispose of the public lands. The BLM will make a final determination on suitability for disposal when there is actually a proposal to implement a disposal action under the approved Record of Decision for the Proposed RMP/Final EIS.

G.1.1. Land Tenure Adjustment Criteria

In accordance with the Federal Land Policy and Management Act (FLPMA) and other laws, Executive Orders, and Departmental and BLM policies, when evaluating opportunities for disposal or acquisition of lands or interests in lands, the following factors will be included. This list is not all inclusive, but represents the major factors to consider.

General Land Tenure Adjustment Evaluation Factors

- Improves manageability of specific areas.
- Maintains or enhances important public values and uses.
- Consolidates federal mineral estate or reunites split surface and mineral estates.
- Facilitates development of energy and mineral potential.
- Reduces difficulty or cost of public land administration.
- Provides access to land for public recreation and other uses.
- Amount of public investments in facilities or improvements and the potential for recovering those investments.
- Suitability of land for management by another federal agency.
- Significance of decision in stabilizing or enhancing lifestyles, business, social, and economic conditions.
- Meets long-term public management goals.

- Facilitates national, state, and local BLM priorities or mission statement needs.
- Consistent with cooperative agreements and plans or policies of other agencies.
- Facilitates implementation of other aspects of the approved resource management plans.

Acquisition Criteria

- Secures lands adjacent to other Zone 1 lands.
- Facilitates access to public land and resources retained for long-term public use.
- Secures Threatened or Endangered or Sensitive plant and animal species habitat.
- Protects riparian areas and wetlands.
- Contributes to biodiversity.
- Protects high-quality scenery.
- Enhances the opportunity for new or emerging public land uses or values.
- Facilitates management.
- Protects significant cultural resources and sites eligible for inclusion on the National Register of Historic Places.
- Provides land for BLM administrative sites.

Disposal Criteria

- Lands of limited public value.
- Widely scattered parcels that have no significant values and are difficult for the BLM to manage beyond custodial administration.
- Lands with high public values for proper management by other federal agencies, or by state and local governments.
- Land that would aid in aggregating or repositioning other public lands or public land resource values, where the public values to be acquired outweigh the public values to be exchanged.

G.1.2. Zone Definitions

Zone 1 – Retention and Acquisition

Retain lands in Zone 1 under BLM administration. Consider acquisition of inholdings in Zone 1 areas, from willing landowners, using the appropriate acquisition authority. Acquired lands would be managed the same as surrounding lands after acquisition. Lands in Zone 1 include:

- National Landscape Conservation System designated lands;
- National Recreation Areas;
- National Recreation Trails;
- Areas of critical environmental concern;
- Research natural areas;
- Developed recreation and administrative sites;
- Designated critical habitat for threatened or endangered species;
- Riparian conservation areas;
- Most of Black River subunit, exclusive of Circle lands.

Zone 2- Suitable for Consolidation

Lands in Zone 2 will be available for acquisition and disposal, including exchange, to enhance public resource values, improve management capabilities, or reduce the potential for land use conflict. For example: Isolated parcels may result from Native- and State-selected lands that are not conveyed and lands relinquished under withdrawal by federal agencies. Zone 2 lands consist of all lands not listed in the descriptions of Zone 1 and Zone 3 lands.

Zone 3- Suitable for Disposal

Lands in Zone 3 will be available for disposal. These lands will include but are not limited to those parcels or areas listed below, in Table G.1, "Potential Zone 3 Lands in the Planning Area, Fortymile Subunit "

- Lands that are either not practical to manage, or are uneconomical to manage (because of their intermingled location and nonsuitability for management by another federal agency).
- Federal mining claims, that are outside of Zone 1 lands and outside of large blocks of BLM-managed lands, that become null and void (mining claims that are surrounded by large blocks of state land and thus difficult to manage).
- Survey hiatuses (gap or space unintentionally left, when describing adjoining parcels of land).
- Encroachments (trespass or intrusion onto another's property).
- Lands subject to PLO 1613 (Alaska highway right-of-way adjustments).
- Reserved federal interests in split-estate lands may be considered for conveyance out of federal ownership.

G.1.3. Zone 3 Lands

The table below describes currently know Zone 3 lands. Zone 3 lands include but are not limited to the parcels described in the table. Many of these parcels are State- or Native-selected. If the parcels are not conveyed, they would become available for disposal.

Table G.1. Potential Zone 3 Lands in the Planning Area, Fortymile Subunit

Legal Location	Selection Status	Other Comments
Copper River Meridian		
T. 14 N., R. 20 E., Secs. 1, 2, 11, 12, and 13 (3,200 acres[a])	State selection	Low priority selection
T. 18 N., R. 12 E., Sec. 25, S ½ SW and SWSE; Sec. 36 NWNE (40 acres)	Village selection, F-14943-B and State selection F-024798	No selection priority indicated
T. 18 N., R. 13 E., Sec. 31, W ½ W ½, (40 acres)	State selection F-27600	Low priority selection
T. 20 N., R. 10 E., Secs. 14, 22, 27, and 34 (2,560 acres)	Village selection, F-14943-B with state topfiling	Lake Mansfield has been conveyed under Interim Conveyance 1508.
T. 21 N., R. 8 E., Sec. 35 (640 acres)	Regional corporation selection F-22481 with state topfiling	
T. 21 N., R. 8 E., Sec. 6 (640 acres)	Village selection, F-14852-B	
T. 23 N., R. 7 E., Sec. 35 (640 acres)	Regional corporation selection F14852-B with state topfiling	
T. 24 N., R. 5 E., Sec. 31 (744 acres)	Regional corporation selection F14852-B with state topfiling	
T. 18 N., R. 11 E., Portions of Sections 3, 4, 8, 9, and 10 (3,400 acres)	State topfiled, low priority	U.S. Survey 2631, known as Tanacross Airfield
T. 18 N., R. 11 E., Lot 5 of USS 2631 (100 acres)	State topfiled, low priority	PLO 1768, Tanacross Fire Control Station administrative site
T. 18 N., R. 11 E., Sec. 12, Lot 5 (90 acres)	State topfiled, low priority	Known as the Tank Farm, under General Services Administration, PLO 1887 (Department of Army)
T. 18 N., R. 15E., Tract A	State selection	Known as Four Mile Lake, located at four mile Taylor Highway.

Legal Location	Selection Status	Other Comments
T. 15 N., R. 12 E., Sections 28-33 with portions of 27 and 34 within Tract A (12,500 acres)	State topfiled on all of Tract A, low priority	Withdrawn for ANCSA Sec. 14 (h) selection
T. 15 N., R. 8 E., Sections 1-27 and 31-34 (19,000 acres)	State topfiled	Withdrawn for ANCSA Sec. 14 (h) selection; Township on the south is interim conveyed.
Fairbanks Meridian		
T. 1 S., R. 16 E., Sec. 24 NW (160 acres)	Withdrawn for Village/Regional Corporation selection by PLO 5563	Known as Salcha East Hot Springs
T. 9 S., R. 10 E., Sec. 3 SW (160 acres)		Withdrawn under PLO 5190 for a Utility Corridor
T. 10 S., R. 10 E., Sec. 2 SWNW, SENW, W ½ SW and S ½ SWSW (80 acres)	State selection	Withdrawn under PLO 5190
T 10 S, R 10 E, Sec. 3 Lots 13, 14 (PLO 5190) and 10, 11, 12, 15, 50, 53 and 55 (50 acres)	State selection	
T. 10 S., R. 10 E., Sec. 11 NESE, S ½ SWSENE (60 acres)	State selection	
T. 10 S., R. 10 E., Sec. 23 USS 3293: Blocks 1, 8, 15, 16, 17, 18, and 19 (100 acres)	State selection	Federal, school or park reserves surveyed for Big Delta townsite platting
T. 1 S., R. 1 W., Sec. 18 S ½NE (5 acres)	Withdrawn by PLO 2550	
Abbreviations: NE (northeast quarter); NW (northwest quarter); SE (southeast quarter); SW (southwest quarter).		

[a]all acres are approximate

G.2. Withdrawals

Virtually all of BLM-managed lands within the planning area are under some type of withdrawal pursuant to the Alaska Native Claims Settlement Act (ANCSA), Alaska National Interest Lands Conservation Act (ANILCA), the Wild and Scenic Rivers Act, or some other federal law. Some areas are covered by multiple withdrawals. The BLM reviews all withdrawals and makes recommendations in the RMP to retain, modify, or revoke withdrawals.

Section 3.3.8 of this document provides more background information on existing withdrawals. The purpose of this Appendix is to provide a more in depth discussion for some of the withdrawals listed in Table 3.35 and the process for modifying or revoking these withdrawals. There are two primary types of withdrawals: public land orders (PLOs) issued by the Secretary of the Interior and legislative withdrawals implemented by Congress through legislation.

ANCSA authorized the Secretary of the Interior (Secretary) to withdraw and reserve public lands for study and classification. This was done through a series of public land orders (PLOs) issued between 1972 and 1975. These are referred to as ANCSA 17(d)(1) withdrawals. The PLOs generally closed the lands to all forms of appropriation under public laws, including mining and mineral leasing. The withdrawals kept the lands unencumbered for selection by ANCSA corporations, and prevented the creation of new third-party interests that would interfere with land conveyance. The withdrawals also allowed the BLM time to study and classify the lands.

Portions of six 17(d)(1) withdrawals cover lands in the Eastern Interior Planning Area. All of the PLOs close lands to the mineral leasing laws. Some close the lands to all types of mining. Others close the lands to mining for non-metalliferous minerals, but allow for metalliferous mining. Additionally, most of these 17(d)(1) PLOs were modified several times. The modifications generally opened lands to state selection, or added additional lands to the withdrawal. One other withdrawal of note, PLO 5150 for a utility corridor (the Trans-Alaska Pipeline), covers land in the Wickersham Dome area, just outside of the White Mountains NRA. That PLO closes these lands to non-metalliferous mining, mineral leasing, and state or native selection.

In addition to the 17(d)(1) withdrawals, some lands in the planning area are withdrawn from the mining laws by legislation. Subject to valid existing rights, Section 402(b) of ANILCA withdraws the Steese National Conservation Area from location, entry, and patent under U.S. mining laws. Subject to valid existing rights, ANILCA Section 1312(b) withdraws the White Mountains NRA from state selection under the Alaska Statehood Act, or other law, and from location, entry, and patent under U.S. mining laws. Lands within one-half mile of Birch Creek Wild and Scenic River (WSR), Beaver Creek WSR, and the wild segments of the Fortymile WSR, are also withdrawn under the Wild and Scenic Rivers Act, pursuant to ANILCA. These legislative withdrawals overlap the 17(d)(1) withdrawals.

Modifying or revoking the 17(d)(1) withdrawals would open some lands in the planning area to mineral leasing and mining of various types of locatable minerals. In some areas however, lifting the 17(d)(1) withdrawals would not have an immediate effect. Lands selected by ANCSA corporations and the State of Alaska would remain "segregated" (unavailable) to mineral leasing or locatable mineral entry (staking of mining claims). If the selections in these areas are relinquished, the lands would then be available for location. Additionally, the White Mountains NRA, the Steese National Conservation Area, and some lands within WSR corridors are withdrawn from mineral entry pursuant to ANILCA. In most cases the ANILCA withdrawals apply to public lands that are also subject to 17(d)(1) withdrawals. In areas withdrawn pursuant to ANILCA, removal of the 17(d)(1) withdrawals could result in opening the area to leasable minerals, but would not open it to locatable minerals unless Congress modifies the ANILCA withdrawal to allow for location.

A common misconception is that a withdrawal is needed to close lands to leasable minerals. The BLM can close lands to leasable minerals through a land use plan decision. Withdrawals are only needed to close lands to location and entry for locatable minerals under the Mining Law of 1872. Because the ANCSA 17(d)(1) PLOs closed lands to leasing under the Minerals Leasing Act of 1920, any planning recommendations to open areas to leasing do not become immediately effective and will require the revocation or modification of the withdrawal. Revocation or modification orders are signed by the Secretary of the Interior.

Table G.2. Existing Mineral Withdrawals in the Eastern Interior Planning Area and Process for Change

Type of Withdrawal	Authorization	Description	Effect	Process for Change
Secretarial	PLO 5150 – Wickersham Dome area	Withdrawal for Utility Corridor (TAPs) as amended.	Subject to valid existing rights, closes described lands to location and entry under the mining laws (except for location of metalliferous minerals), to leasing under the mineral leasing laws and to selection by the State under the Alaska Statehood Act.	To open described lands to public land laws, the Secretary of the Interior issues a new PLO (which partially revokes the existing PLO) and opening order; The new PLO becomes effective the date of publication in the *Federal Register*. The Final EIS associated with the RMP provides NEPA compliance for the revocation order/opening order. No additional public notification is required.
Secretarial 17(d)(1)	PLO 5180 – White Mountains NRA and Steese National Conservation Area	Withdrawal for Classification and for Protection of Public Interest in lands; amended by PLOs 5193, 5242, 5250, 5251, 5254, 5257, 5321, 5391, 5418, 5657, 6092.	Subject to valid existing rights, closes described lands to location and entry under the mining laws (except for location of metalliferous minerals) and to leasing under the mineral leasing laws.	
Secretarial 17(d)(1)	PLO 5186 – Fairbanks area	Withdrawal for Classification and Protection of Public Interest in Lands Not Selected by State. Amended by PLOs 5254, 5242, and 5776.		
Secretarial 17(d)(1)	PLO 5173 –Black River / Fortymile Subunits	Withdrawal for selection by Regional Corporation; amended by PLOs 5252, 5321, 5391, and 5657	Subject to valid existing rights, closes described lands to location and entry under the mining and to leasing under the mineral leasing laws.	
Secretarial 17(d)(1)	PLO 5179 –Birch, Beaver, and Fortymile WSR corridors,	Withdrawal in Aid of Legislation concerning addition to or creation of conservation units (wild and scenic rivers); modified by PLOs 5192,		

Type of Withdrawal	Authorization	Description	Effect	Process for Change
	plus additional lands.	5250, 5251, 5257, 5254, 5657, 6092		
Secretarial 17(d)(1)	PLO 5184 – Fortymile Subunit / Circle lands	Withdrawal for Classification or Reclassification of some areas withdrawn by Section 11 of ANCSA		
Congressional	ANILCA 402(b) 43 U.S.C. 1716(b)	Withdraws Steese National Conservation Area	Subject to valid existing rights, withdraws lands from location, entry, and patent under U.S. mining laws; where consistent with land use plan mineral development may be permitted under the Minerals Leasing Act or the Minerals Materials Act. No federal lands shall be transferred out of public ownership except by exchange pursuant to FLPMA.	Secretary can modify to open lands to entry, location, and patent under the U.S. mining laws. Changes would be made through a PLO and opening order, similar to the process for 17(d)(1)
Congressional	ANILCA 1312(b) 16 U.S.C 460MM-4	Withdraws White Mountains NRA	Subject to valid existing rights, withdraws lands from location, entry, and patent under U.S. mining laws and state selection.	Secretary may permit the removal of nonleasable minerals and leasable minerals. Only Congress can change to allow for staking of new mining claims.
Congressional	ANILCA 606(a)(2) 16 U.S.C. 1285b	Amends Section 15 of the WSR Act to withdraw lands within ½ mile of bed and banks of Beaver Creek and Birch Creek WSR; and lands within ½ mile of bed and banks of wild segments of the Fortymile WSR.	Subject to valid existing rights, withdraws lands from all forms of appropriation under the mining laws and from operation of the mineral leasing laws including amendments thereto.	Only Congress can open lands to prohibited activities.

G.3. Process for Revocation

G.3.1. Steps for Revoking 17(d)(1) Withdrawals

After a record of decision (ROD) recommending revocation for one or more PLOs is issued for the Proposed RMP/Final EIS, the BLM would follow the general process outlined below to implement the revocation. In most cases, it would be a partial revocation as these PLOs extend beyond the planning area boundaries and the ROD only addresses those portions of the PLOs within the planning area. After the ROD is issued, no further public notice is required to proceed with the revocation. The Proposed RMP/Final EIS covers the environmental impacts of opening lands to the public land laws and provides compliance with NEPA.

The revocation is affected by issuing a new PLO, which either replaces the existing PLO or amends it. As part of this new PLO, an opening order is also issued. Once approved by the Secretary, this combination of a new PLO and opening order opens the lands described in the PLO to the referenced public land laws.

1. BLM Alaska drafts a new PLO including a legal land description that describes the areas where the existing PLO would be revoked. Land descriptions are separated into paragraphs describing the action (such as opening lands to FLPMA sales, mineral leasing laws, or the Mining Law of 1872) that would apply to each legal description.
2. BLM Alaska submits this PLO/opening order and related documents through the Director of the BLM to the Secretary of the Interior for review and approval. Related documents include pertinent portions of the administrative record for the Eastern Interior RMP, such as the Section 810 analysis.
3. The Secretary's Office reviews the PLO package and submits it to the Secretary for signature.
4. Once signed, the PLO and opening order are published in the *Federal Register*. The actions take effect on the publication date of the PLO.
5. If any of the lands opened by the new PLO are selected by the State or Native corporations, these lands would remain closed until the selections were relinquished or the lands conveyed.

G.3.2. Modifying Legislative Withdrawal in the Steese National Conservation Area

Section 402(b) of ANILCA withdraws the Steese National Conservation Area from location, entry, and patent under U.S. mining laws, but also authorizes the Secretary to open such lands through the planning process. Under Alternatives C and D of this Proposed RMP/Final EIS, the BLM recommends that the Secretary open portions of the Conservation Area to mineral location and entry. If this recommendation was carried forward into the ROD, the process of opening the Conservation Area would be similar to that described above for revocation of 17(d)(1) withdrawals. Because the Conservation Area is also covered by 17(d)(1) withdrawals, PLO 5180 and PLO 5179, these PLOs would need to be partially revoked and an opening order issued to fully open the area.

G.3.3. Process for new FLPMA Withdrawals

Alternatives B–E in the Proposed RMP/Final EIS recommends new withdrawals from mineral location and entry to protect resources. After the ROD is approved, a separate withdrawal process will need to be followed. The requirements for the withdrawal process are covered at 43 CFR 2300 and involve filing a petition/application with the Secretary of the Interior and the completion of reports and studies, including a mineral potential report. In Alaska, note that any new withdrawals over 5,000 acres are subject to Section 1326 of ANILCA, which states, "...the President or the Secretary may withdraw public lands in the State of Alaska exceeding five thousand acres in the aggregate, which withdrawal shall not become effective until notice is provided in the *Federal Register* and to both Houses of Congress. Such withdrawal shall terminate unless Congress passes a joint resolution of approval within one year after the notice of such withdrawal has been submitted to Congress."

New FLPMA withdrawals from mineral location and entry are proposed for all action alternatives (B-E) in the Proposed RMP/Final EIS (Maps 90-93). New withdrawals would not be needed in the Steese National Conservation Area, Beaver Creek, and White Mountains NRA, as these areas are withdrawn from mineral location and entry by ANILCA. However, small withdrawals of lands adjacent to these areas (such as Wickersham Dome) are proposed in most alternatives. In Birch Creek and the wild segments of the Fortymile WSRs, the ANILCA withdrawal from mineral entry and location extends one-half mile from the bed and banks of the river. In some areas the designated corridor is wider than the one-half-mile withdrawal. In these areas new FLPMA withdrawal from mineral location and entry of any lands within the designated corridor that are not withdrawn by ANILCA is proposed. Also riparian conservation areas along Birch Creek are recommended for withdrawal from mineral entry and location to protect fisheries and aquatic habitat. New withdrawals are proposed in the scenic and recreational sections of the Fortymile WSR in Alternatives B, C, and E as these areas are not withdrawn by ANILCA.

Type of Withdrawal	**Authority**	**Description**	**Effect**	**Process for Change**
New FLPMA withdrawals	FLMPA 204	New withdrawals from mineral location and entry under FLPMA are proposed in Alternatives B–E. ANCSA withdrawals would be retained until new withdrawals are in effect (approved by Congress). FLPMA withdrawals are subject to review and renewal every 20 years.	Withdraw lands from location and entry under U.S. mining law.	Secretary of the Interior approves PLO withdrawing lands; Published in *Federal Register*; if over 5,000 acres submitted to Congress; Terminates if Congress does not approve within one year of notification.

G.3.4. Effects of Alternatives

No new withdrawals or withdrawal revocations would be recommended under the Alternative A (No Action). In all action alternatives (B-E) there would be new FLPMA withdrawals from mineral entry and location recommended. Additionally revocation of all 17(d)(1) withdrawals is recommended, but in some areas revocation would be delayed until the new withdrawal is in place. Under Alternatives C and D, the BLM recommends the Secretary exercise their authority to open portions of the Steese National Conservation Area to new mineral entry. Under Alternative D the BLM recommends the Secretary exercise their authority to allow for leasing of locatable minerals in the White Mountains. Recommended withdrawal acres in the following table are estimated through GIS and generally rounded to the nearest 1,000 acres. Acres may change before any withdrawal recommendations are implemented because the BLM will continue to convey land to the State and Native corporations in the planning area until land entitlements are met. Additionally, the BLM's withdrawal database used to calculate these acreages has some errors.

Table G.3. Recommended Withdrawal Actions by Alternative

<table>
<tr><th>Action</th><th>Alternative A</th><th>Alternative B</th><th>Alternative C</th><th>Alternative D</th><th>Alternative E</th></tr>
<tr><td rowspan="2">Recommended new FLPMA withdrawals, all Subunits combined</td><td>No Action on withdrawals</td><td colspan="4">In areas recommended closed to mineral location, retain ANSCA 17(d)(1) withdrawals (portions of PLOs 5173, 5179, 5180, 5186 and 5184 as amended) until new FLPMA withdrawals can be put into place. Once FLPMA withdrawals are in place, partially revoke ANCSA withdrawals.</td></tr>
<tr><td>No Action on withdrawals</td><td>3,362,000 acres new FLPMA withdrawals proposed</td><td>541,000 acres new FLPMA withdrawals proposed</td><td>83,000 acres new FLPMA withdrawals proposed</td><td>2,500,000 acres new FLPMA withdrawals proposed</td></tr>
<tr><td>New FLPMA Fortymile Subunit</td><td>No Action on withdrawals</td><td>970,000 acres new FLPMA withdrawals proposed</td><td>511,000 acres new FLPMA withdrawals proposed</td><td>52,000 acres new FLPMA withdrawals proposed</td><td>649,000 acres new FLPMA withdrawals proposed</td></tr>
<tr><td>New FLPMA Steese Subunit</td><td>No Action on withdrawals</td><td colspan="3">18,000 acres new FLPMA withdrawals proposed</td><td>25,000 acres new FLPMA withdrawals proposed</td></tr>
<tr><td>New FLPMA Upper Black River Subunit</td><td>No Action on withdrawals</td><td>2,360,000 acres new FLPMA withdrawals proposed</td><td colspan="2">None</td><td>1,813,000 acres new FLPMA withdrawals proposed</td></tr>
<tr><td>New FLPMA White Mountains Subunit</td><td>No Action on withdrawals</td><td colspan="4">13,000 acres new FLPMA withdrawals proposed</td></tr>
<tr><td rowspan="2">Recommended Partial Revocation of ANCSA 17(d)(1) All subunits combined</td><td>No Action on withdrawals</td><td colspan="4">In areas recommended open to mineral location and leasing, issue partial revocations or modification of PLOs 5173, 5179, 5180, 5186 and 5184 as amended in the planning area.</td></tr>
<tr><td>No Action on withdrawals</td><td>3,162,000[a] acres recommended for immediate revocation; 3,361,000 acres revocation delayed until new FLPMA withdrawals in place.</td><td>5,981,000 [a] acres recommended for immediate revocation; 542,000 acres revocation delayed until new FLPMA withdrawals in place.</td><td>6,471,000 [a] acres recommended for immediate revocation; 52,000 acres revocation delayed until new FLPMA withdrawals in place.</td><td>4 million[a] acres recommended for immediate revocation; 2,500,000 acres revocation delayed until new FLPMA withdrawals in place.</td></tr>
<tr><td>Recommended Modification of PLO 5150</td><td>No modification</td><td colspan="4">Retain those portions of PLO 5150 and PLO 5180 that overlap with the White Mountains Special Recreation Management area (in the Wickersham Dome area) until a new FLPMA withdrawal can be implemented to withdraw this area from metalliferous mineral entry. The new FLPMA withdrawal would include approximately 13,000 acres and would modify PLO 5150. Once the FLPMA withdrawal is in place partially revoke PLO 5180.</td></tr>
<tr><td>Recommended Openings in the Steese National Conservation Area</td><td>No opening orders</td><td>None. Partially revoke PLOs 5180 and 5179 where they overlap with the National Conservation Area.</td><td>Issue opening order to open 241,000 acres to locatable mineral entry. Partially revoke PLOs 5180 and 5179 where they overlap with the National Conservation Area.</td><td>Issue opening order to open 646,000 acres to locatable mineral entry. Partially revoke PLOs 5180 and 5179 where they overlap with the National Conservation Area.</td><td>Same as B.</td></tr>
</table>

Action	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended Openings White Mountains NRA	No opening orders	None. Partially revoke PLOs 5180 and 5179 where they overlap with the NRA.		Issue opening order to open 160,000 acres to leasing of locatable minerals. Partially revoke PLO 5180 and 5179 where they overlap with NRA.	Same as B and C.
Birch Creek WSR new FLPMA withdrawals	No Action on withdrawals	Recommend new FLPMA withdrawal on 1,600 acres that are within the designated corridor, but outside of the ½ mile buffer withdrawn by the Wild and Scenic Rivers Act pursuant to ANILCA. This only applies to the portion of Birch Creek that is outside of the Steese National Conservation Area and includes small acreage on both upper and lower Birch Creek.			
Fortymile WSR – wild segments	No Action on withdrawals	Recommend new FLPMA withdrawal on approximately 48,000 acres on the wild segments of the river; includes lands outside of the ½ mile buffer withdrawn by the Wild and Scenic Rivers Act pursuant to ANILCA, but inside of the designated corridor.			
Fortymile WSR – scenic segments	No Action on withdrawals	Recommend new FLPMA withdrawal of approximately 100,000 acres in the designated scenic river corridor.		No new FLPMA withdrawal recommended	Same as B and C.
Fortymile WSR – recreational segments	No Action on withdrawals	Recommend new FLPMA withdrawal of approximately 3,400 acres in the designated recreational river corridor.			

[a] Includes areas covered by ANILCA withdrawal such as the Steese National Conservation Area and White Mountains NRA. Acres are appoximate

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Appendix H

Recreation Management Zones

Appendix H. Recreation Management Zones

Chapter 2 of the Proposed RMP/Final EIS delineates Recreation Management Zones (RMZs) within each Special Recreation Management Area. The tables in this appendix provide additional information on how each RMZ would be managed.

Each RMZ would have the following characteristics:

1. Serve a different recreation niche within the primary recreation market;
2. Produce a different set of recreation opportunities and facilitate the attainment of different experience and benefit outcomes (to individuals, households and communities, economies, and the environment);
3. Require a different set of recreation provider actions to meet strategically-targeted primary recreation market demand; and,
4. Has distinctive recreation setting character as described in the Recreation Setting Character matrix (RSC).Table 2.5, “Recreation Setting Character Matrix for the Eastern Interior Planning Area”

For each RMZ, the following implementation decisions would be made:

1. Identify the corresponding recreation niche to be served;
2. Write explicit recreation management objectives for the specific recreation opportunities to be produced and the outcomes to be attained (activities, experiences, and benefits);
3. Prescribe recreation setting character conditions required to produce recreation opportunities and facilitate the attainment of both recreation experiences and beneficial outcomes, as targeted above (the Recreation Opportunity Spectrum is one of the existing tools for both describing existing setting character and prescribing desired setting character); and,
4. Briefly describe an activity planning framework that addresses the recreation management, Information and Education, monitoring, and administrative support actions (e.g., visitor services, permits and fees, recreation concessions, and appropriate use restrictions) necessary to achieve the recreation management objectives and setting prescriptions.

The following sections include tables that depict the four recreation decisions that would be made for each RMZ. Those RMZs that have management common to more than one alternative are only discussed under the first alternative in which they occur.

H.1. Fortymile Special Recreation Management Area

The Fortymile Special Recreation Management Area (SRMA) includes up to ten RMZs. The number and boundaries of RMZs vary by alternative, as does the management. Specific management for each RMZ, by alternative, is described in the following sections.

H.1.1. Fortymile Alternative B

The following tables outline management decisions and objectives for each RMZ in Alternative B. The Fortymile SRMA includes lands outside the Fortymile WSR Corridor and is divided into the following RMZs, displayed on Map 44.

- RMZ 2, North Fork Fortymile
- RMZ 3, Mosquito Fork Fortymile
- RMZ 4, Fortymile

- RMZ 5, West Fork Fortymile
- RMZ 8, Wade Creek
- RMZ 9, Chicken
- RMZ 10, Eagle

Table H.1. Alternative B, North Fork Fortymile, Recreation Management Zone 2

Fortymile SRMA - RMZ 2 -North Fork Fortymile		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Semi-Primitive Interior Alaska river setting, on one of America's nationally designated Wild and Scenic Rivers.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5=totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Float boating, river camping **Secondary:** Trapping, snowmobiling, hunting	**Primary:** Escaping crowds, experiencing solitude, enjoying the sights, sounds and smells of nature, experiencing adventure **Secondary:** Testing your abilities	**Personal:** Enhanced sense of personal freedom, enhanced sense of competence, greater sense of adventure **Community/Social:** Heightened awareness of the natural world **Environmental:** Reduced negative human impacts such as litter, vegetative trampling, and unplanned trail construction
SETTING CHARACTER DECISION - SEMI-PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage these waterways for non-motorized float boating and dispersed river camping opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.	
Information and Education	Provide outreach to Alaska float boaters seeking a Semi-Primitive river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the river environment by promoting the principles of the Leave No Trace program.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, experiences and outcomes. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a) . Airboat, hovercraft, and personal watercraft use would not be allowed on "wild" non-navigable segments of the river. General: Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purpose of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.2. Alternative B, Mosquito Fork Fortymile, Recreation Management Zone 3

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 3 -Mosquito Fork Fortymile</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide trapping opportunities for users who desire an experience characterized by self-reliance and challenge in a Semi-Primitive Interior Alaska river setting, with access to one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Trapping
Secondary: Snowmobiling, Hunting</td><td>Primary: Escaping crowds, experiencing solitude, experiencing adventure
Secondary: Testing your ability</td><td>Personal: Enhanced sense of personal freedom, better understanding of wildlife's contribution to my own quality of life, greater sense of adventure
Community/Social: Enlarged sense of community dependency on public lands
Economic: More positive contributions to local/regional economy</td></tr>
<tr><th colspan="3">SETTING CHARACTER DECISION - SEMI-PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage this zone for local trapping opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to local trappers seeking a Semi-Primitive experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Tread Lightly and Leave No Trace programs.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, experiences and outcomes. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a) . Airboat, hovercraft, and personal watercraft use would not be allowed on “wild” non-navigable segments of the river. General: Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.3. Alternative B, Fortymile, Recreation Management Zone 4

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 4 - Fortymile</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Backcountry Interior Alaska river setting, on one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary:
Float boating; river camping
Secondary: Fishing; hunting; trapping; snowmobiling; OHV Use</td><td>Primary: Escaping crowds; experiencing solitude; enjoying the sights, sounds and smells of nature; experiencing adventure
Secondary:
Having time to reflect</td><td>Personal: Greater connection with nature; Improved outlook on life; Increased self-confidence
Community/Social: Greater awareness of minimal impact recreation
Environmental: Increased awareness and protection of natural landscapes
Economic: More positive contributions to local/regional economy</td></tr>
<tr><th colspan="3">SETTING CHARACTER DECISION - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage these waterways for float boating and river camping opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, providing some facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to Alaska float boaters seeking a Backcountry river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the river environment by promoting the principles of the Tread Lightly and Leave No Trace programs.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only (Map 44). A permit or Plan of Operations would be required for all other OHV use. Aircraft, motorboats, airboats, hovercraft and personal watercraft use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.4. Alternative B, West Fork Fortymile, Recreation Management Zone 5

Fortymile SRMA - RMZ 5 -West Fork Fortymile

SRMA DESCRIPTION

The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Backcountry Interior Alaska river setting, on one of America's nationally designated Wild and Scenic Rivers.

SRMA OBJECTIVE

Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)

PRIMARY TARGETED OUTCOMES

Activities	Experiences	Benefits
Primary: Float boating; river camping **Secondary:** Fishing; Hunting; Trapping; Snowmobiling; OHV use	**Primary:** Escaping crowds; Experiencing solitude; Enjoying the sights, sounds and smells of nature; Experiencing adventure **Secondary:** Having time to reflect	**Personal:** Greater connection with nature; Improved outlook on life; Increased self-confidence **Community/Social:** Greater awareness of minimal impact recreation **Environmental:** Increased awareness and protection of natural landscapes **Economic:** More positive contributions to local/regional economy

SETTING CHARACTER DECISION - BACKCOUNTRY (Table 2.5)

IMPLEMENTATION FRAMEWORK DECISION

Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage for float boating and dispersed river camping opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, providing some facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and periodic administrative presence.
Information and Education	Provide outreach to Alaska float boaters seeking a Backcountry river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Tread Lightly and Leave No Trace programs.
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.
Administrative	Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only (Map 44). A permit or Plan of Operations would be required for all other OHV use. Aircraft, motorboats, airboats, hovercraft and personal watercraft use would be unrestricted. General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.

Table H.5. Alternative B Wade Creek, Recreation Management Zone 8

<table>
<tr><th colspan="4">Fortymile SRMA - RMZ 8-Wade Creek</th></tr>
<tr><th colspan="4">SRMA DESCRIPTION</th></tr>
<tr><td colspan="4">The focus this zone would be to provide high quality scenic driving and cultural and historical appreciation opportunities for a variety of users in a partially modified Frontcountry setting, in an area well known for its high concentrations of mineral deposits, such as gold.</td></tr>
<tr><th colspan="4">SRMA OBJECTIVE</th></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="4">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th colspan="2">Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Scenic Driving

Secondary: Developed camping; Hiking/walking; Gold panning (hobby mineral collecting); Snowmobiling; OHV use</td><td colspan="2">Primary: Connecting with history; Experiencing new and different things; Spending time with family and friends; Getting away from the usual demands of life

Secondary:
Having time to reflect; Relieving stress</td><td>Personal: Improved outdoor knowledge; Greater connection with nature; Enhanced sense of personal freedom

Community/Social: Heightened awareness of the natural world

Environmental: Increased awareness and protection of natural landscapes

Economic: More positive contributions to local/regional economy</td></tr>
<tr><th colspan="4">SETTING CHARACTER DECISION - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="4">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td colspan="2">Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for scenic driving and cultural and historical appreciation opportunities. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, providing improved yet modest facility development and visitor services, routine social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td colspan="2">Information and Education</td><td colspan="2">Provide outreach to scenic drivers seeking a Frontcountry experience. Establish a relationship with stakeholders to maintain positive contributions to the local and regional economy.</td></tr>
<tr><td colspan="2">Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td colspan="2">Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only (Map 44). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.6. Alternative B, Chicken, Recreation Management Zone 9

Fortymile SRMA - RMZ 9-Chicken		
SRMA DESCRIPTION		
The focus this zone would be to provide scenic driving and historic and cultural appreciation opportunities for users who desire a Middlecountry recreation experience characterized by increased modifications to the landscape with access to a historic mining region located in east Alaska's Interior, in an area well known for its unique tourism opportunities.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)es.		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Scenic driving, Cultural/historic appreciation **Secondary:** Developed camping, float boating, Snowmobiling, OHV Use	**Primary:** Enjoying the scenery and natural landscapes **Secondary:** Spending time with family and friends; experiencing new and different things	**Personal:** Improved outlook on life **Community/Social:** Greater protection of cultural history sites; improved family bonding **Environmental:** Sustainability of communities historical and cultural heritage **Economic:** More positive contributions to local/regional economy; Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits
SETTING CHARACTER DECISION - MIDDLECOUNTRY (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage this zone for scenic driving opportunities related to cultural and historic appreciation. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.	
Information and Education	Provide outreach to scenic drivers seeking a Middlecountry experience. Establish a relationship with stakeholders to maintain the sustainability of the community's historic and cultural heritage.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only (Map 44). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted. General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.7. Alternative B, Eagle, Recreation Management Zone 10

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 10-Eagle</th></tr>
<tr><td colspan="3">SRMA DESCRIPTION</td></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality cultural and historical appreciation opportunities for a variety of users in a developed setting at Fort Egbert, one of east Alaska’s only National Historic Sites.</td></tr>
<tr><td colspan="3">SRMA OBJECTIVE</td></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><td colspan="3">PRIMARY TARGETED OUTCOMES</td></tr>
<tr><td>Activities</td><td>Experiences</td><td>Benefits</td></tr>
<tr><td>Primary: Cultural/historic appreciation
Secondary: Developed camping; Hiking/walking; photography; Snowmobiling; OHV use</td><td>Primary: Experiencing cultural history
Secondary: Spending time with family and friends; Enjoying the sights, sounds, and smells of nature</td><td>Personal: Improved outdoor knowledge; Improved mental health; Greater connection with nature
Community/Social: Greater protection of cultural history sites
Environmental: Greater protection of area historic structures and sites
Economic: Increased local tourism revenue</td></tr>
<tr><td colspan="3">SETTING CHARACTER DECISION - RURAL (Table 2.5)</td></tr>
<tr><td colspan="3">IMPLEMENTATION FRAMEWORK DECISION</td></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Rural classification. The primary focus would be to manage this zone for cultural and historic appreciation opportunities. Emphasis would be placed on providing Rural recreation experiences by maintaining the substantially modified landscape, providing significant facility development and visitor services, a significant level of social encounters, restricted mechanized/motorized use, and significant administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to international, national, regional, state and local users seeking a Rural setting. Establish a relationship with stakeholders to achieve greater protection of cultural history sites.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Rural recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only (Map 44). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted. .
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

H.1.2. Fortymile Alternative C

The following tables outline management decisions and objectives for each RMZ in the Fortymile SRMA under Alternative C. Under this alternative, the SRMA only includes lands within the Fortymile WSR Corridor. The SRMA is divided into nine RMZs under this alternative, thus the numbering of the RMZs is not consecutive. Alternative C includes the following RMZ (Map 45):

- RMZ 1, Middle Fork Fortymile
- RMZ 3, Mosquito Fork (Same as Alternative B, Table H.2, “Alternative B, Mosquito Fork Fortymile, Recreation Management Zone 3”)
- RMZ 4, Fortymile
- RMZ 5, West Fork Fortymile
- RMZ 6, Logging Cabin Creek
- RMZ 7, O'Brien Creek
- RMZ 8, Wade Creek
- RMZ 9, Chicken
- RMZ 10, Eagle

Table H.8. Alternatives C and D, Middle Fork Fortymile, Recreation Management Zone 1

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 1 -Middle Fork Fortymile</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Semi-Primitive Interior Alaska river setting, on one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating, river camping.
Secondary: Snowmobiling, hunting, trapping</td><td>Primary: Escaping crowds; experiencing solitude; experiencing adventure; enjoying the sights, sounds, and smells of nature
Secondary: Testing your abilities</td><td>Personal: Enhanced sense of personal freedom; enhanced sense of competence; greater sense of adventure
Community/Social: Heightened awareness of natural world
Environmental: Reduced negative human impacts such as litter, vegetative trampling, and unplanned trail construction</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage this zone for non-motorized boating, trapping, and dispersed river camping opportunities. Emphasis would be placed on providing Semi-Primitive. recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use (see administrative section below), and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to Alaska float boaters seeking a Semi-Primitive river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the river environment by promoting the principles of the Leave No Trace program.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, experiences and outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a) . Airboat, hovercraft, and personal watercraft use would not be allowed on "wild" non-navigable segments of the river.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.9. Alternative C, Fortymile, Recreation Management Zone 4

<table>
<tr><th colspan="4">Fortymile SRMA - RMZ 4 -Fortymile</th></tr>
<tr><th colspan="4">SRMA DESCRIPTION</th></tr>
<tr><td colspan="4">The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Backcountry Interior Alaska river setting, on one of America’s nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="4">SRMA OBJECTIVE</th></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="4">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th colspan="2">Experiences</th><th>Benefits</th></tr>
<tr><td>**Primary:** Float boating, River camping

Secondary: Fishing, Hunting, Trapping, Snowmobiling, OHV Use</td><td colspan="2">**Primary:** Escaping crowds; Experiencing solitude; Enjoying the sights, sounds, and smells of nature; Experiencing adventure

Secondary: Having time to reflect</td><td>**Personal:** Greater connection with nature; Improved outlook on life; Increased self-confidence

Community/Social: Greater awareness of minimal impact recreation

Environmental: Increased awareness and protection of natural landscapes

Economic: More positive contributions to local/regional economy</td></tr>
<tr><th colspan="4">Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="4">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><th>Management</th><td colspan="3">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage these waterways for float boating and river camping opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, providing some facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><th>Information and Education</th><td colspan="3">Provide outreach to Alaska float boaters seeking a Backcountry river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the river environment by promoting the principles of the Tread Lightly and Leave No Trace programs.</td></tr>
<tr><th>Monitoring</th><td colspan="3">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><th>Administrative</th><td colspan="3">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 45). A permit or Plan of Operations would be required for all other OHV use. Aircraft, motorboats, airboats, hovercraft and personal watercraft use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.10. Alternative C, West Fork Fortymile, Recreation Management Zone 5

<table>
<tr><th colspan="4">Fortymile SRMA - RMZ 5 -West Fork Fortymile</th></tr>
<tr><th colspan="4">SRMA DESCRIPTION</th></tr>
<tr><td colspan="4">The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Backcountry Interior Alaska river setting, on one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="4">SRMA OBJECTIVE</th></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="4">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th colspan="2">Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating, River camping

Secondary: Fishing, Hunting, Trapping, Snowmobiling, OHV Use</td><td colspan="2">Primary: Escaping crowds, Experiencing solitude, Enjoying the sights, sounds, and smells of nature, Experiencing adventure

Secondary: Having time to reflect</td><td>Personal: Greater connection with nature; Improved outlook on life; Increased self-confidence

Community/Social: Greater awareness of minimal impact recreation

Environmental: Increased awareness and protection of natural landscapes

Economic: More positive contributions to local/regional economy</td></tr>
<tr><th colspan="4">Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="4">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="3">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage for float boating and dispersed river camping opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, providing some facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="3">Provide outreach to Alaska float boaters seeking a Backcountry river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Tread Lightly and Leave No Trace programs.</td></tr>
<tr><td>Monitoring</td><td colspan="3">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="3">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 45). A permit or Plan of Operations would be required for all other OHV use. Aircraft, motorboats, airboats, hovercraft and personal watercraft use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.11. Alternative C, Logging Cabin Creek, Recreation Management Zone 6

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 6 -Logging Cabin Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality scenic driving opportunities for users who desire a Middlecountry recreation experience characterized by easy access to historical and cultural features in a Middlecountry Interior Alaska setting, with access to one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>**Primary:** Scenic driving
Secondary: Developed camping; Hunting; Snowmobiling; OHV Use</td><td>**Primary:** Enjoying scenery and natural landscape
Secondary: Spending time with family and friends; Experiencing new and different things</td><td>**Personal:** Greater connection with nature; Improved outlook on life
Community/Social: Greater protection of cultural history sites; Improved family bonding
Environmental:
Economic: Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>**Management**</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for scenic driving opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>**Information and Education**</td><td colspan="2">Provide outreach to scenic drivers seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to maintain protection of cultural history sites.</td></tr>
<tr><td>**Monitoring**</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>**Administrative**</td><td colspan="2">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 45). A permit or Plan of Operations would be required for all other OHV use. Aircraft use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.12. Alternative C, O'Brien Creek, Recreation Management Zone 7

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 7 -O'Brien Creek</th></tr>
<tr><td colspan="3">**SRMA DESCRIPTION**</td></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality scenic driving opportunities for users who desire a recreation experience characterized by easy access to historical and cultural features in a Middlecountry Interior Alaska setting, with access to one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><td colspan="3">**SRMA OBJECTIVE**</td></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><td colspan="3">**PRIMARY TARGETED OUTCOMES**</td></tr>
<tr><td>**Activities**</td><td>**Experiences**</td><td>**Benefits**</td></tr>
<tr><td>**Primary:** Scenic driving
Secondary: Trapping; Hunting; Snowmobiling; OHV Use</td><td>**Primary:** Enjoying scenery and natural landscape
Secondary: Spending time with family and friends; Experiencing new and different things</td><td>**Personal:** Greater connection with nature
Community/Social: Improved family bonding
Environmental:
Economic: Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits</td></tr>
<tr><td colspan="3">**Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)**</td></tr>
<tr><td colspan="3">**IMPLEMENTATION FRAMEWORK DECISION**</td></tr>
<tr><td>**Management**</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for scenic driving opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>**Information and Education**</td><td colspan="2">Provide outreach to scenic drivers seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to ensure the ability for visitors to find areas that produce desired recreation opportunities, experiences and benefits.</td></tr>
<tr><td>**Monitoring**</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>**Administrative**</td><td colspan="2">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 45). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.13. Alternative C, Wade Creek, Recreation Management Zone 8

Fortymile SRMA - RMZ 8 -Wade Creek		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality scenic driving and cultural and historical appreciation opportunities for a variety of users in a partially modified Frontcountry setting, in an area well known for its high concentrations of mineral deposits, such as gold.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Scenic driving **Secondary:** Developed camping, Hiking/walking, Gold panning (hobby mineral collecting), Snowmobiling, OHV Use	**Primary:** Connecting with history; Experiencing new and different things; Spending time with family and friends; Getting away from the usual demands of life **Secondary:** Having time to reflect; Relieving stress	**Personal:** Improved outdoor knowledge; Greater connection with nature; Enhanced sense of personal freedom **Community/Social:** Heightened awareness of the natural world **Environmental:** Increased awareness and protection of natural landscapes **Economic:** More positive contributions to local/regional economy
Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for scenic driving and cultural and historical appreciation opportunities. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, providing improved yet modest facility development and visitor services, routine social encounters, restricted mechanized/motorized use, and routine administrative presence.	
Information and Education	Provide outreach to scenic drivers seeking a Frontcountry experience. Establish a relationship with stakeholders to maintain positive contributions to the local and regional economy.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, and targeted outcomes. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 45). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted. General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.14. Alternative C, Chicken, Recreation Management Zone 9

<table>
<tr><th colspan="6">Fortymile SRMA - RMZ 9 -RMZ Chicken</th></tr>
<tr><th colspan="6">SRMA DESCRIPTION</th></tr>
<tr><td colspan="6">The focus this zone would be to provide scenic driving and historic and cultural appreciation opportunities for users who desire a Frontcountry recreation experience characterized by increased modifications to the landscape with access to a historic mining region located in east Alaska's Interior, in an area well known for its unique tourism opportunities.</td></tr>
<tr><th colspan="6">SRMA OBJECTIVE</th></tr>
<tr><td colspan="6">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="6">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th colspan="2">Activities</th><th colspan="2">Experiences</th><th colspan="2">Benefits</th></tr>
<tr><td colspan="2">Primary: Scenic driving; Cultural/historic appreciation
Secondary: Developed camping; Float boating; Snowmobiling; OHV Use</td><td colspan="2">Primary: Enjoying the scenery and natural landscape
Secondary: Spending time with family and friends; Experiencing new and different things</td><td colspan="2">Personal: Improved outlook on life
Community/Social: Greater protection of cultural history sites; Improved family bonding
Environmental: Sustainability of communities historical and cultural heritage
Economic: More positive contributions to local/regional economy; Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits</td></tr>
<tr><th colspan="6">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="6">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="5">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage this zone for scenic driving opportunities related to cultural and historic appreciation. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, providing improved yet modest facility development and visitor services, routine social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="5">Provide outreach to scenic drivers seeking a Frontcountry experience. Establish a relationship with stakeholders to maintain the sustainability of the community's historic and cultural heritage.</td></tr>
<tr><td>Monitoring</td><td colspan="5">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="5">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED: All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 45). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General: Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.15. Alternative C, Eagle, Recreation Management Zone 10

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 10 -Eagle</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality cultural and historical appreciation opportunities for a variety of users in a developed setting at Fort Egbert, one of east Alaska's only National Historic Sites.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>**Primary:** Cultural/historic appreciation
Secondary: Developed camping; hiking/walking; Photography; Snowmobiling/ OHV Use</td><td>**Primary:** Experiencing cultural history
Secondary: Spending time with family and friends; Enjoying the sights, sounds, and smells of nature</td><td>**Personal:** Improved outdoor knowledge; Improved mental health; Greater connection with nature
Community/Social: Greater protection of cultural history sites
Environmental: Greater protection of area historic structures and sites
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - RURAL (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>**Management**</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Rural classification. The primary focus would be to manage this zone for cultural and historic appreciation opportunities. Emphasis would be placed on providing Rural recreation experiences by maintaining the substantially modified landscape, providing significant facility development and visitor services, a significant level of social encounters, restricted mechanized/motorized use, and significant administrative presence.</td></tr>
<tr><td>**Information and Education**</td><td colspan="2">Provide outreach to international, national, regional, state and local users seeking a Rural setting. Establish a relationship with stakeholders to achieve greater protection of cultural history sites.</td></tr>
<tr><td>**Monitoring**</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>**Administrative**</td><td colspan="2">Apply administrative actions as needed to create and maintain Rural recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 45). A permit or Plan of Operations would be required for all other OHV use. Aircraft use and motorboat would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

H.1.3. Fortymile Alternative D

The following tables outline management decisions and objectives for each RMZ in the Fortymile SRMA under Alternative D. Under this alternative, the SRMA only includes lands within the Fortymile WSR Corridor. The SRMA is divided into ten RMZs under this alternative which are displayed on Map 46. Alternative D includes the following RMZ:

- RMZ 1, Middle Fork Fortymile (Same as Alternative C, Table H.8, “Alternatives C and D, Middle Fork Fortymile, Recreation Management Zone 1”)
- RMZ 2, North Fork Fortymile
- RMZ 3, Mosquito Fork
- RMZ 4, Fortymile
- RMZ 5, West Fork Fortymile
- RMZ 6, Logging Cabin Creek
- RMZ 7, O'Brien Creek
- RMZ 8, Wade Creek
- RMZ 9, Chicken
- RMZ 10, Eagle

Table H.16. Alternative D, North Fork Fortymile, Recreation Management Zone 2

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 2 -North Fork Fortymile</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge, and risk in a Backcountry Interior Alaska river setting, on one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating; River camping

Secondary: Trapping; Snowmobiling; Hunting; OHV Use</td><td>Primary: Escaping crowds; Experiencing solitude; Enjoying the sights, sounds, and smells of nature; Experiencing adventure

Secondary: Testing your abilities</td><td>Personal: Enhanced sense of personal freedom; Enhanced sense of competence; Greater sense of adventure

Community/Social: Heightened awareness of natural world

Environmental: Reduced negative human impacts such as litter, vegetative trampling, and unplanned trail construction</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage these waterways for non-motorized boating, trapping, and dispersed river camping opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, providing some facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to Alaska float boaters seeking a Backcountry river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Tread Lightly and Leave No Trace programs.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes.
<u>OHV area designation = LIMITED</u> All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). Airboat, hovercraft, and personal watercraft would not be allowed on river segments above the Kink.
<u>General</u> Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.17. Alternative D, Mosquito Fork, Recreation Management Zone 3

Fortymile SRMA - RMZ 3 -Mosquito Fork		
SRMA DESCRIPTION		
The focus this zone would be to provide trapping opportunities for users who desire an experience characterized by self-reliance and challenge in a Backcountry Interior Alaska river setting, with access to one of America's nationally designated Wild and Scenic Rivers.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Trapping **Secondary:** Snowmobiling; Hunting; OHV Use	**Primary:** Escaping crowds; Experiencing solitude; Experiencing adventure **Secondary:** Testing your abilities	**Personal:** Enhanced sense of personal freedom; Better understanding of wildlife's contribution to my own quality of life; Greater sense of adventure **Community/Social:** Enlarged sense of community dependency on public lands **Economic:** More positive contributions to local/regional economy
Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage this zone for local trapping opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, providing some facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and periodic administrative presence.	
Information and Education	Provide outreach to local trappers seeking a Backcountry experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the river environment by promoting the principles of the Tread Lightly and Leave No Trace programs.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). Airboat, hovercraft, and personal watercraft would not be allowed on river segments above the Mosquito Fork confluence with Ingle Creek. General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.18. Alternative D, Fortymile, Recreation Management Zone 4

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 4 -Fortymile</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, recreational float boat and dispersed camping opportunities for users who desire a Middlecountry recreation experience characterized by increased modifications to the landscape with access to a historic mining region in east Alaska's Interior, on one of America's nationally designated Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating; River camping
Secondary: Fishing; Hunting; Trapping; Snowmobiling; OHV Use</td><td>Primary: Escaping crowds; Experiencing solitude; Enjoying the sights, sounds, and smells of nature; Experiencing adventure
Secondary: Having time to reflect</td><td>Personal: Greater connection with nature; Improved outlook on life; Increased self-confidence
Community/Social: Greater awareness of minimal impact recreation
Environmental: Increased awareness and protection of natural landscapes
Economic: More positive contributions to local/regional economy</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for float boating and river camping opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to Alaska float boaters seeking a Middlecountry river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Tread Lightly and Leave No Trace programs.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.19. Alternative D, West Fork Fortymile, Recreation Management Zone 5

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 5 -West Fork Fortymile</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by self-reliance, challenge, and risk in a Middlecountry Interior Alaska river setting, on one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating; River camping
Secondary: Fishing; Hunting; Trapping; Snowmobiling; OHV Use</td><td>Primary: Escaping crowds; Experiencing solitude; Enjoying the sights, sounds, and smells of nature; Experiencing adventure
Secondary: Having time to reflect</td><td>Personal: Greater Connection with Nature; Improved outlook on life; Increased self-confidence
Community/Social: Greater awareness of minimal impact recreation
Environmental: Increased awareness and protection of natural landscapes
Economic: More positive contributions to local/regional economy</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for float boating and river camping opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet naturally-appearing landscape, providing moderate facility development and visitor services, periodic social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to Alaska float boaters seeking a Middlecountry river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Tread Lightly and Leave No Trace programs.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.20. Alternative D, Logging Cabin Creek, Recreation Management Zone 6

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 6 -Logging Cabin Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, scenic driving opportunities for users who desire a recreation experience characterized by easy access to historical and cultural features in a Frontcountry Interior Alaska setting, on one of America’s nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Scenic driving

Secondary: Developed camping; Hunting; Snowmobiling; OHV Use</td><td>Primary: Enjoying scenery and natural landscape

Secondary: Spending time with family and friends; Experiencing new and different things</td><td>Personal: Greater connection with nature; Improved outlook on life;

Community/Social: Greater protection of cultural history sites; Improved family bonding

Economic: Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for scenic driving opportunities. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, providing improved yet modest facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to scenic drivers seeking a Frontcountry recreation experience.

Establish a relationship with stakeholders to maintain protection of cultural history sites.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.21. Alternative D, O'Brien Creek, Recreation Management Zone 7

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 7 - O'Brien Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality scenic driving opportunities for users who desire a recreation experience characterized by easy access to historical and cultural features in a Frontcountry east-Interior Alaska setting, with access to one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Scenic driving
Secondary: Developed camping; Hunting; Snowmobiling; OHV Use</td><td>Primary: Enjoying scenery and natural landscape
Secondary: Spending time with family and friends; Experiencing new and different things</td><td>Personal: Greater connection with nature; Improved outlook on life
Community/Social: Greater protection of cultural history sites; Improved family bonding
Economic: Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><th>Management</th><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for scenic driving opportunities. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><th>Information and Education</th><td colspan="2">Provide outreach to scenic drivers seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to ensure the ability for visitors to find areas that produce desired recreation opportunities, experiences and benefits.</td></tr>
<tr><th>Monitoring</th><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><th>Administrative</th><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.22. Alternative D, Wade Creek, Recreation Management Zone 8

<table>
<tr><th colspan="4">Fortymile SRMA - RMZ 8 -Wade Creek</th></tr>
<tr><th colspan="4">SRMA DESCRIPTION</th></tr>
<tr><td colspan="4">The focus this zone would be to provide high quality scenic driving and cultural and historical appreciation opportunities for a variety of users in a partially modified Frontcountry setting, in an area well known for its high concentrations of mineral deposits, such as gold.</td></tr>
<tr><th colspan="4">SRMA OBJECTIVE</th></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="4">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th colspan="2">Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Scenic driving

Secondary: Developed camping; Hiking/walking; Gold panning (hobby mineral collecting); Snowmobiling; OHV use</td><td colspan="2">Primary: Connecting with history; Experiencing new and different things; Spending time with family and friends; Getting away from the usual demands of life

Secondary: Having time to reflect; Relieving stress</td><td>Personal: Improved outdoor knowledge; Greater connection with nature; Enhanced sense of personal freedom

Community/Social: Heightened awareness of the natural world

Environmental: Increased awareness and protection of natural landscapes

Economic: More positive contributions to local/regional economy</td></tr>
<tr><th colspan="4">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="4">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="3">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for scenic driving and cultural and historical appreciation opportunities. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, providing improved yet modest facility development and visitor services, routine social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="3">Provide outreach to scenic drivers seeking a Frontcountry experience. Establish a relationship with stakeholders to maintain positive contributions to the local and regional economy.</td></tr>
<tr><td>Monitoring</td><td colspan="3">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="3">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.23. Alternative D, Chicken, Recreation Management Zone 9

<table>
<tr><th colspan="4">Fortymile SRMA - RMZ 9 - Chicken</th></tr>
<tr><th colspan="4">SRMA DESCRIPTION</th></tr>
<tr><td colspan="4">The focus this zone would be to provide scenic driving and historic and cultural appreciation opportunities for users who desire a Rural recreation experience characterized by increased modifications to the landscape with access to a historic mining region located in east Alaska's Interior, in an area well known for its unique tourism opportunities.</td></tr>
<tr><th colspan="4">SRMA OBJECTIVE</th></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="4">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th colspan="2">Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Scenic driving; Cultural/historic appreciation

Secondary: Developed camping; Float boating; Snowmobiling; OHV use</td><td colspan="2">Primary: Enjoying the scenery and natural landscape

Secondary: Spending time with family and friends; Experiencing new and different things</td><td>Personal: Improved outlook on life

Community/Social: Greater protection of cultural history sites; Improved family bonding

Environmental: Sustainability of communities historical and cultural heritage

Economic: More positive contributions to local/regional economy; Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits</td></tr>
<tr><th colspan="4">Recreation Setting Character Description - RURAL (Table 2.5)</th></tr>
<tr><th colspan="4">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="3">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Rural classification. The primary focus would be to manage this zone for scenic driving opportunities related to cultural and historic appreciation. Emphasis would be placed on providing Rural recreation experiences by maintaining the substantially modified landscape, providing significant facility development and visitor services, a significant level of social encounters, restricted mechanized/motorized use, and significant administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="3">Provide outreach to scenic drivers seeking a Rural experience. Establish a relationship with stakeholders to maintain the sustainability of the community's historic and cultural heritage.</td></tr>
<tr><td>Monitoring</td><td colspan="3">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="3">Apply administrative actions as needed to create and maintain Rural recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
.
General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.24. Alternative D, Eagle, Recreation Management Zone 10

Fortymile SRMA - RMZ 10 -Eagle		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality cultural and historical appreciation opportunities for a variety of users in a developed setting at Fort Egbert, one of east Alaska's only National Historic Sites.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Cultural/historic appreciation **Secondary:** Developed Camping; Hiking/walking; Photography; Snowmobiling; OHV use	**Primary:** Experiencing cultural history **Secondary:** Spending time with family and friends; Enjoying the sights, sounds, and smells of nature	**Personal:** Improved outdoor knowledge; Improved mental health; Greater connection with nature **Community/Social:** Greater protection of cultural history sites **Environmental:** Greater protection of area historic structures and sites **Economic:** Increased local tourism revenue
Recreation Setting Character Description - RURAL (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Rural classification. The primary focus would be to manage this zone for cultural and historic appreciation opportunities. Emphasis would be placed on providing Rural recreation experiences by maintaining the substantially modified landscape, providing significant facility development and visitor services, a significant level of social encounters, restricted mechanized/motorized use, and significant administrative presence.	
Information and Education	Provide outreach to international, national, regional, state and local users seeking a Rural setting. Establish a relationship with stakeholders to achieve greater protection of cultural history sites.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Rural recreation opportunities, and targeted outcomes. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,500 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted. General Fire pans and portable toilets would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

H.1.4. Fortymile Alternative E

The following tables outline management decisions and objectives for each RMZ in the Fortymile SRMA under Alternative E. Under this alternative, the SRMA only includes lands within the Fortymile WSR Corridor. The SRMA is divided into five RMZs which are displayed on Map 47. Alternative E includes the following RMZ:

- RMZ 1, Middle Fork/Mosquito Fork Fortymile
- RMZ 2, West Fork/Main Fortymile
- RMZ 3, Logging Cabin/O'Brien Creek
- RMZ 4, Wade Creek/Chicken
- RMZ 5, Eagle

Table H.25. Alternative E, Middle Fork/Mosquito Fork Fortymile, Recreation Management Zone 1

<table>
<tr><th colspan="4">Fortymile SRMA - RMZ 1 - Middle Fork/Mosquito Fork Fortymile</th></tr>
<tr><th colspan="4">SRMA DESCRIPTION</th></tr>
<tr><td colspan="4">The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Semi-Primitive Interior Alaska river setting, on one of America’s nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="4">SRMA OBJECTIVE</th></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="4">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th colspan="2">Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating, river camping, trapping
Secondary: Snowmobiling, hunting</td><td colspan="2">Primary: Escaping crowds; experiencing solitude; experiencing adventure; enjoying the sights, sounds, and smells of nature
Secondary: Testing your abilities</td><td>Personal: Enhanced sense of personal freedom; enhanced sense of competence; greater sense of adventure
Community/Social: Heightened awareness of natural world
Environmental: Reduced negative human impacts such as litter, vegetative trampling, and unplanned trail construction</td></tr>
<tr><th colspan="4">Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="4">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="3">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage this zone for non-motorized boating, trapping, and dispersed river camping opportunities. Emphasis would be placed on providing Semi-Primitive. recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use (see administrative section below), and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="3">Provide outreach to Alaska float boaters seeking a Semi-Primitive river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the river environment by promoting the principles of the Leave No Trace program.</td></tr>
<tr><td>Monitoring</td><td colspan="3">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="3">Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.26. Alternative E, West Fork/Main Fortymile, Recreation Management Zone 2

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 2 - West Fork/Main Fortymile</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, multi-day recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Backcountry Interior Alaska river setting, on one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating, River camping
Secondary: Fishing, Hunting, Trapping, Snowmobiling, OHV Use</td><td>Primary: Escaping crowds; Experiencing solitude; Enjoying the sights, sounds, and smells of nature; Experiencing adventure
Secondary: Having time to reflect</td><td>Personal: Greater connection with nature; Improved outlook on life; Increased self-confidence
Community/Social: Greater awareness of minimal impact recreation
Environmental: Increased awareness and protection of natural landscapes
Economic: More positive contributions to local/regional economy</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage these waterways for float boating and river camping opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, providing some facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to Alaska float boaters seeking a Backcountry river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the river environment by promoting the principles of the Tread Lightly and Leave No Trace programs.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.27. Alternative E, Logging Cabin/O'Brien Creek, Recreation Management Zone 3

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 3 - Logging Cabin/O'Brien Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality scenic driving opportunities for users who desire a Middlecountry recreation experience characterized by easy access to historical and cultural features in a Middlecountry Interior Alaska setting, with access to one of America's nationally designated Wild and Scenic Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Scenic driving
Secondary: Developed camping; Hunting; Snowmobiling; OHV Use</td><td>Primary: Enjoying scenery and natural landscape
Secondary: Spending time with family and friends; Experiencing new and different things</td><td>Personal: Greater connection with nature; Improved outlook on life
Community/Social: Greater protection of cultural history sites; Improved family bonding
Environmental:
Economic: Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for scenic driving opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to scenic drivers seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to maintain protection of cultural history sites.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.28. Alternative E, Wade Creek/Chicken, Recreation Management Zone 4

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 4 - Wade Creek/Chicken</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality scenic driving and cultural and historical appreciation opportunities for a variety of users in a partially modified Frontcountry setting, in an area well known for its high concentrations of mineral deposits, such as gold.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Scenic driving; Cultural/historic appreciation

Secondary: Developed camping, Hiking/walking, Gold panning (hobby mineral collecting), Snowmobiling, OHV Use, floatboating</td><td>Primary: Connecting with history; Experiencing new and different things; Spending time with family and friends; Getting away from the usual demands of life

Secondary: Having time to reflect; Relieving stress</td><td>Personal: Improved outdoor knowledge; Greater connection with nature; Enhanced sense of personal freedom

Community/Social: Greater protection of cultural history sites; Improved family bonding

Environmental: Sustainability of communities historical and cultural heritage

Economic: More positive contributions to local/regional economy; Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for scenic driving and cultural and historical appreciation opportunities. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, providing improved yet modest facility development and visitor services, routine social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to scenic drivers seeking a Frontcountry experience. Establish a relationship with stakeholders to maintain the sustainability of the community's historic and cultural heritage. .</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, targeted outcomes and setting character.
<u>OHV area designation: LIMITED</u> Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.29. Alternative E, Eagle, Recreation Management Zone 5

<table>
<tr><th colspan="3">Fortymile SRMA - RMZ 5 - Eagle</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality cultural and historical appreciation opportunities for a variety of users in a developed setting at Fort Egbert, one of east Alaska's only National Historic Sites.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Cultural/historic appreciation
Secondary: Developed camping; hiking/walking; Photography; Snowmobiling/OHV Use</td><td>Primary: Experiencing cultural history
Secondary: Spending time with family and friends; Enjoying the sights, sounds, and smells of nature</td><td>Personal: Improved outdoor knowledge; Improved mental health; Greater connection with nature
Community/Social: Greater protection of cultural history sites
Environmental: Greater protection of area historic structures and sites
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - RURAL (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Rural classification. The primary focus would be to manage this zone for cultural and historic appreciation opportunities. Emphasis would be placed on providing Rural recreation experiences by maintaining the substantially modified landscape, providing significant facility development and visitor services, a significant level of social encounters, restricted mechanized/motorized use, and significant administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to international, national, regional, state and local users seeking a Rural setting. Establish a relationship with stakeholders to achieve greater protection of cultural history sites.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Rural recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

H.2. Steese Special Recreation Management Area

The Steese Special Recreation Management Area (SRMA) includes up to ten RMZs. The number and boundaries of RMZs vary by alternative, as does the management. Specific management for each RMZ is described in the tables in the following sections.

H.2.1. Steese Alternative B

The following tables outline management decisions and objectives for each RMZ in the Steese SRMA under Alternative B. The SRMA is divided into seven RMZs, which are listed below and are displayed on Map 49.

- RMZ 1, Birch Creek
- RMZ 2, Pinnell Mountain Trail
- RMZ 3, Mount Prindle Research Natural Area
- RMZ 4, Big Windy Research Natural Area
- RMZ 5, Preacher Creek
- RMZ 6, Harrison Creek
- RMZ 7, Wolf Creek

Table H.30. Alternative B Birch Creek Recreation Management Zone 1

Steese SRMA - RMZ 1 -Birch Creek		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality, multi-day road accessible recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Semi-Primitive Interior Alaska setting, on one of America's nationally designated "Wild" Rivers.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Float boating; Camping	**Primary:** Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things **Secondary:** Testing your abilities	**Personal:** More exercise-oriented lifestyle; Greater connection with nature; Greater sense of adventure; Enhanced sense of competence **Community/Social:** Greater awareness of minimal impact recreation; Greater opportunities for youth **Environmental:** Heightened awareness of the natural world; Greater protection of fish and wildlife habitat **Economic:** Increased local tourism revenue
Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage this zone for non-motorized float-boating and river camping opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.	
Information and Education	Provide outreach to national, state and local float-boaters seeking a Semi-Primitive river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Leave No Trace program.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). Airboats, hovercraft, and personal watercraft would not be allowed on wild river segments above the confluence of Birch Creek and an unnamed creek in FM T. 6 N., R, 17 E., Section 8. General Fire pans would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.31. Alternative B, Pinnell Mountain, Recreation Management Zone 2

Steese SRMA - RMZ 2 -Pinnell Mountain		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality, backpacking (multi-day) and hiking (day use) opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting, on one of America's National Recreation Trails.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Backpacking; Hiking/walking	**Primary:** Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exercise/physical fitness	**Personal:** Improved outlook on life; Improved physical fitness; Improved mental health; Greater connection with nature; Enhanced sense of competence **Community/Social:** Greater awareness of minimal impact recreation; Greater opportunities for youth **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue
Recreation Setting Character Description - PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized backpacking and hiking opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.	
Information and Education	Provide outreach to national, state and local backpackers and hikers seeking a Primitive recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Leave No Trace program.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). The Pinnell Mountain National Recreation Trail would be designated as non-motorized. General Stoves would be required for permitted commercial activities. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.32. Alternative B Mt. Prindle Research Natural Area, Recreation Management Zone 3

<table>
<tr><th colspan="3">Steese SRMA - RMZ 3 - Mt. Prindle Research Natural Area</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, climbing, hunting and research opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Climbing; Hunting; Nature study (research)</td><td>Primary: Competence testing; Escaping crowds; Experiencing nature</td><td>Personal: Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Positive economic contributions to communities
Environmental: Heightened awareness of the natural world; Greater protection of distinctive natural landscapes
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized climbing, hunting and research opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, providing minimal facility development and visitor services, providing infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to climbers, hunters and researches seeking a Primitive recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation = CLOSED All forms of non-motorized use would be allowed. A permit or Plan of Operations would be required for all OHV use. Closed to camping. Trails may be developed outside the RNA.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.33. Alternative B Big Windy Research Natural Area, Recreation Management Zone 4

Steese SRMA - RMZ 4 -Big Windy Research Natural Area		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality research opportunities for users who desire an experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting containing an undeveloped hot springs system, uncommon and isolated plant species, and delicate geologic structures.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Nature study (research)	**Primary:** Competence testing; Escaping crowds; Experiencing nature	**Personal:** Greater connection with nature; Enhanced sense of personal freedom **Community/Social:** Greater community involvement in land use planning process **Environmental:** Greater protection of distinctive natural landscapes
Recreation Setting Character Description - PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized research opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.	
Information and Education	Provide outreach to researches seeking a unique and scientific Primitive experience. Establish a relationship with stakeholders to increase community involvement with BLM's planning process.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character. OHV area designation = CLOSED All forms of non-motorized use would be allowed. A permit or Plan of Operations would be required for all OHV use. Closed to camping. Trails may be developed outside the RNA. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.34. Alternative B, Preacher Creek, Recreation Management Zone 5

<table>
<tr><th colspan="3">Steese SRMA - RMZ 5 - Preacher Creek</th></tr>
<tr><td colspan="3">SRMA DESCRIPTION</td></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality backpacking (multi-day), hiking and gold panning (day use) opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting.</td></tr>
<tr><td colspan="3">SRMA OBJECTIVE</td></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><td colspan="3">PRIMARY TARGETED OUTCOMES</td></tr>
<tr><td>Activities</td><td>Experiences</td><td>Benefits</td></tr>
<tr><td>Primary: Backpacking; Hiking/walking; Recreational Gold Panning</td><td>Primary: Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exploration of the area</td><td>Personal: Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Positive economic contributions to communities
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><td colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</td></tr>
<tr><td colspan="3">IMPLEMENTATION FRAMEWORK DECISION</td></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized backpacking, hiking, and gold panning opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local backpackers, hikers and gold panners seeking a Primitive recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). Airboats, hovercraft, and personal watercraft would not be allowed.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.35. Alternative B, Harrison Creek, Recreation Management Zone 6

<table>
<tr><th colspan="4">Steese SRMA - RMZ 6 - Harrison Creek</th></tr>
<tr><th colspan="4">SRMA DESCRIPTION</th></tr>
<tr><td colspan="4">The focus this zone would be to provide hunting, photography and wildlife viewing opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge, and risk in a Backcountry Interior Alaska setting.</td></tr>
<tr><th colspan="4">SRMA OBJECTIVE</th></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="4">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th colspan="2">Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting, Photography, Wildlife viewing</td><td colspan="2">Primary: Escaping crowds; Escaping personal pressures; Experiencing nature</td><td>Personal: Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Greater community involvement in the land use planning process
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="4">Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="4">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="3">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage for hunting, photography and wildlife viewing opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, and by providing some additional facility development and visitor services, periodic social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="3">Provide outreach to state and local hunters, photographers and wildlife viewers seeking a Backcountry recreation experience. Establish a relationship with stakeholders to provide a greater level of involvement with BLM's planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="3">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="3">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). Airboats, hovercraft, and personal watercraft would not be allowed
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.36. Alternative B, Wolf Creek, Recreation Management Zone 7

Steese SRMA - RMZ 7 - Wolf Creek		
SRMA DESCRIPTION		
The focus this zone would be to provide hunting, photography and wildlife viewing opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Hunting; Photography; Wildlife; Viewing	**Primary:** Escaping personal pressures; Escaping crowds; Experiencing nature	**Personal:** Greater connection with nature; Enhanced sense of competence **Community/Social:** Greater community involvement in the land use planning process **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue
Recreation Setting Character Description - PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized hunting, photography and wildlife viewing opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.	
Information and Education	Provide outreach to national, state and local hunters, photographers and wildlife viewers seeking a Primitive recreation experience. Establish a relationship with stakeholders to increase community involvement in BLM's planning process.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). Airboats, hovercraft, and personal watercraft would not be allowed. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

H.2.2. Steese Alternative C

The following tables outline management decisions and objectives for each RMZ in the Steese SRMA under Alternative C. The SRMA is divided into 10 RMZs, which are listed below and displayed on Map 50.

- RMZ 1, Birch Creek
- RMZ 2, Pinnell Mountain Trail
- RMZ 3, Mount Prindle Research Natural Area
- RMZ 4, Big Windy Research Natural Area
- RMZ 5, Preacher Creek
- RMZ 6, Harrison Creek
- RMZ 7, Wolf Creek
- RMZ 8, Rock Creek
- RMZ 9, Clums
- RMZ 10, Rocky Mountain Uplands

Table H.37. Alternatives C and D, Birch Creek Recreation Management Zone 1

<table>
<tr><th colspan="3">Steese SRMA - RMZ 1 -Birch Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, multi-day road accessible recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Semi-Primitive Interior Alaska setting, on one of America's nationally designated "Wild" Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating; Camping</td><td>Primary: Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things

Secondary: Testing your abilities</td><td>Personal: More exercise-oriented lifestyle; Greater connection with nature; Greater sense of adventure; Enhanced sense of competence
Community/Social: Greater awareness of minimal impact recreation; Greater opportunities for youth

Environmental: Heightened awareness of the natural world; Greater protection of fish and wildlife habitat

Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage this zone for non-motorized float-boating and river camping opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to national, state and local float-boaters seeking a Semi-Primitive river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Leave No Trace program.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). Airboats, hovercraft, and personal watercraft would not be allowed on wild river segments above the confluence of Birch Creek and an unnamed creek in FM T. 6. N., R, 17. E., Section 8.
General Fire pans would be required for permitted commercial river use. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.38. Alternatives C and D, Pinnell Mountain Trail, Recreation Management Zone 2

Steese SRMA - RMZ 2 - Pinnell Mountain Trail		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality backpacking (multi-day) and hiking (day use) opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Semi-Primitive Interior Alaska setting, on one of America's formally designated National Recreation Trails.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Backpacking; Hiking/walking	**Primary:** Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exercise/physical fitness	**Personal:** Improved outlook on life; Improved physical fitness; Improved mental health; Greater connection with nature; Enhanced sense of competence **Community/Social:** Greater awareness of minimal impact recreation; Greater opportunities for youth **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue
Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage for non-motorized backpacking and hiking opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.	
Information and Education	Provide outreach to national, state and local backpackers and hikers seeking a Semi-Primitive recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Leave No Trace program.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). Airboats, hovercraft, and personal watercraft would not be allowed. The Pinnell Mountain National Recreation Trail would be designated non-motorized. General Stoves would be required for permitted commercial activities. Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.39. Alternatives C and D, Mt. Prindle Research Natural Area, Recreation Management Zone 3

<table>
<tr><th colspan="3">Steese SRMA - RMZ 3 - Mt. Prindle Research Natural Area</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, climbing, hunting and research opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Climbing; Hunting; Nature study (research)</td><td>Primary: Competence testing; Escaping crowds; Experiencing nature</td><td>Personal: Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Positive economic contributions to communities
Environmental: Heightened awareness of the natural world; Greater protection of distinctive natural landscapes
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized climbing, hunting and research opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, providing minimal facility development and visitor services, providing infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to climbers, hunters and researches seeking a Primitive recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation = CLOSED All forms of non-motorized use would be allowed. A permit or Plan of Operations would be required for all OHV use. Primitive camping and hiking trails would be allowed.
General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.40. Alternatives C and D, Big Windy Research Natural Area, Recreation Management Zone 4

<table>
<tr><th colspan="4">Steese SRMA - RMZ 4 -Big Windy Research Natural Area</th></tr>
<tr><td colspan="4">SRMA DESCRIPTION</td></tr>
<tr><td colspan="4">The focus this zone would be to provide high quality research opportunities for users who desire an experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting containing an undeveloped hot springs system, uncommon and isolated plant species, and delicate geologic structures.</td></tr>
<tr><td colspan="4">SRMA OBJECTIVE</td></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><td colspan="4">PRIMARY TARGETED OUTCOMES</td></tr>
<tr><td colspan="2">Activities</td><td>Experiences</td><td>Benefits</td></tr>
<tr><td colspan="2">Primary: Nature study (research)</td><td>Primary: Competence testing; Escaping crowds; Experiencing nature</td><td>Personal: Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Greater community involvement in land use planning process
Environmental: Greater protection of distinctive natural landscapes</td></tr>
<tr><td colspan="4">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</td></tr>
<tr><td colspan="4">IMPLEMENTATION FRAMEWORK DECISION</td></tr>
<tr><td>Management</td><td colspan="3">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized research opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="3">Provide outreach to researches seeking a unique and scientific Primitive experience. Establish a relationship with stakeholders to increase community involvement with BLM's planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="3">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="3">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation = CLOSED All forms of non-motorized use would be allowed. A permit or Plan of Operations would be required for all OHV use.
Primitive camping and hiking trails would be allowed.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.41. Alternative C, Preacher Creek, Recreation Management Zone 5

<table>
<tr><th colspan="4">Steese SRMA - RMZ 5 -Preacher Creek</th></tr>
<tr><th colspan="4">SRMA DESCRIPTION</th></tr>
<tr><td colspan="4">The focus this zone would be to provide backpacking, hiking, gold panning, and OHV use opportunities for users who desire a recreation experience characterized by self-reliance, challenge and a moderate level of risk in a Middlecountry Interior Alaska setting.</td></tr>
<tr><th colspan="4">SRMA OBJECTIVE</th></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="4">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th colspan="2">Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Backpacking; Hiking/walking; Recreational Gold Panning; OHV use</td><td colspan="2">Primary: Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exploration of the area</td><td>Personal: Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Positive economic contributions to communities
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="4">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="4">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="3">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for backpacking, hiking, gold panning, and OHV opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="3">Provide outreach to state and local backpackers, hikers, gold panners and OHV users seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.</td></tr>
<tr><td>Monitoring</td><td colspan="3">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="3">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, targeted outcomes and setting character.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,000 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 50). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.42. Alternative C, Harrison Creek, Recreation Management Zone 6

<table>
<tr><th colspan="3">Steese SRMA - RMZ 6 - Harrison Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide hunting, photography, wildlife viewing, and OHV use opportunities for users who desire a recreation experience characterized by self-reliance, challenge, and a relatively low degree of risk in a Frontcountry Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting; Photography; Wildlife viewing; OHV use</td><td>Primary: Escaping crowds; Escaping personal pressures; Experiencing nature</td><td>Personal: Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Greater community involvement in the land use planning process
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for hunting, photography, wildlife viewing, and OHV opportunities. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local hunters, photographers, wildlife viewers and OHV users seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to provide increased community involvement in the land use planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,000 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 50). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.43. Alternative C, Wolf Creek, Recreation Management Zone 7

Steese SRMA - RMZ 7 - Wolf Creek		
SRMA DESCRIPTION		
The focus this zone would be to provide hunting, photography and wildlife viewing opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Semi-Primitive Interior Alaska setting.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Hunting; Photography; Wildlife; Viewing	**Primary:** Escaping personal pressures; Escaping crowds; Experiencing nature	**Personal:** Greater connection with nature; Enhanced sense of competence **Community/Social:** Greater community involvement in the land use planning process **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue
Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage for non-motorized hunting, photography and wildlife viewing opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.	
Information and Education	Provide outreach to national, state and local hunters, photographers and wildlife viewers seeking a Semi-Primitive recreation experience. Establish a relationship with stakeholders to increase community involvement in BLM's planning process.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.44. Alternative C, Rock Creek, Recreation Management Zone 8

<table>
<tr><th colspan="3">Steese SRMA - RMZ 8 - Rock Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to high quality backpacking, hunting, photography, and wildlife viewing opportunities for users who desire an experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Semi-Primitive Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Backpacking; Hunting; Photography; Wildlife viewing</td><td>Primary: Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things</td><td>Personal: Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Positive economic contribution to communities
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage for non-motorized backpacking, hunting photography, and wildlife viewing opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local backpackers, hunters, photographers, and wildlife viewers seeking a Semi-Primitive recreation experience.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.45. Alternative C, Clums, Recreation Management Zone 9

<table>
<tr><th colspan="3">Steese SRMA - RMZ 9 - Clums</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide hunting, photography, wildlife viewing, and OHV use opportunities for users who desire a recreation experience characterized by self-reliance, challenge, and a lower degree of risk in a Middlecountry Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting; Photography; Wildlife viewing; OHV use</td><td>Primary: Escaping crowds; Escaping personal pressures; Experiencing nature</td><td>Personal: Enhanced sense of personal freedom; Greater connection with nature
Community/Social: Greater community involvement in the land use planning process
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for both non-motorized (hunting, photography and wildlife viewing) and motorized (OHV use) opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local users seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to provide a greater level of involvement with BLM's planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of OHVs 1,000 pounds curb weight and less would be allowed May 1 to October 14 on existing routes only, except for game retrieval (Map 50). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.46. Alternatives C and D, Rocky Mountain Uplands, Recreation Management Zone 10

<table>
<tr><th colspan="3">Steese SRMA - RMZ 10 - Rocky Mountain Uplands</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide hunting, climbing and snowmobiling opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge, and risk in a Backcountry Interior Alaska river setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting; Climbing; Snowmobiling</td><td>Primary: Escaping crowds; Escaping personal pressures; Experiencing nature; Experiencing new and different things</td><td>Personal: Greater connection with nature; Improved outlook on life; Improved physical fitness; Enhanced sense of personal freedom

Community/Social: Positive economic contributions to communities

Environmental: Heightened awareness of the natural world

Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage for hunting, climbing and snowmobiling opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, and by providing some additional facility development and visitor services, periodic social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local hunters. climbers and snowmobilers seeking a Backcountry recreation experience. Establish a relationship with stakeholders to provide positive economic contributions to local communities.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

H.2.3. Steese Alternative D

The following tables outline management decisions and objectives for the RMZ in the Steese SRMA under Alternative D. The SRMA is divided into nine RMZs under this alternative, which are listed below and displayed on Map 51. Tables for RMZs where management is the same as an earlier alternative are not displayed in this section (e.g., RMZs one to four, and 10).

- RMZ 1, Birch Creek (Same as Alternative C,Table H.37, "Alternatives C and D, Birch Creek Recreation Management Zone 1")
- RMZ 2, Pinnell Mountain Trail (Same as Alternative C, Table H.38, "Alternatives C and D, Pinnell Mountain Trail, Recreation Management Zone 2")
- RMZ 3, Mount Prindle Research Natural Area (Same as Alternative C, Table H.39, "Alternatives C and D, Mt. Prindle Research Natural Area, Recreation Management Zone 3")
- RMZ 4, Big Windy Research Natural Area (Same as Alternative C, Table H.40, "Alternatives C and D, Big Windy Research Natural Area, Recreation Management Zone 4")
- RMZ 5, Preacher Creek
- RMZ 6, Harrison Creek
- RMZ 7, Wolf Creek
- RMZ 9, Clums
- RMZ 10, Rocky Mountain Uplands (Same as Alternative C, Table H.46, "Alternatives C and D, Rocky Mountain Uplands, Recreation Management Zone 10")

Table H.47. Alternative D, Preacher Creek, Recreation Management Zone 5

Steese SRMA - RMZ 5 - Preacher Creek		
SRMA DESCRIPTION		
The focus this zone would be to provide backpacking, hiking, gold panning, and OHV use opportunities for users who desire a recreation experience characterized by self-reliance, challenge and a moderate level of risk in a Frontcountry Interior Alaska setting.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Backpacking; Hiking/walking; Recreational Gold Panning; OHV use	**Primary:** Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exploration of the area	**Personal:** Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom **Community/Social:** Positive economic contributions to communities **Environmental:** Heightened awareness of the natural world **Economic:** Increased local tourism revenue
Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for backpacking, hiking, gold panning, and OHV opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.	
Information and Education	Provide outreach to state and local backpackers, hikers, gold panners and OHV users seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use (May 1 to October 14) of OHVs weighing 1,000 pounds curb weight and less would be allowed. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.48. Alternative D, Harrison Creek, Recreation Management Zone 6

<table>
<tr><th colspan="3">Steese SRMA - RMZ 6 - Harrison Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide hunting, photography, wildlife viewing, and OHV use opportunities for users who desire a recreation experience characterized by self-reliance, challenge, and a relatively low degree of risk in a Frontcountry Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting; Photography; Wildlife viewing; OHV use</td><td>Primary: Escaping crowds; Escaping personal pressures; Experiencing nature</td><td>Personal: Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Greater community involvement in the land use planning process
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for hunting, photography, wildlife viewing, and OHV opportunities. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local hunters, photographers, wildlife viewers and OHV users seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to provide increased community involvement in the land use planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,000 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.49. Alternative D, Wolf Creek, Recreation Management Zone 7

<table>
<tr><th colspan="3">Steese SRMA - RMZ 7 - Wolf Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide hunting, photography, wildlife viewing, and OHV opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge and risk in a Backcountry Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting; Photography; Wildlife Viewing; Snowmobiling</td><td>Primary: Escaping personal pressures; Escaping crowds; Experiencing nature</td><td>Personal: Greater connection with nature; Enhanced sense of competence
Community/Social: Greater community involvement in the land use planning process
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage for hunting, photography, wildlife viewing, and snowmobiling opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, and by providing some additional facility development and visitor services, periodic social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to national, state and local hunters, photographers, wildlife viewers, and snowmobilers seeking a Backcountry recreation experience. Establish a relationship with stakeholders to increase community involvement in BLM's planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.50. Alternative D, Clums, Recreation Management Zone 9

<table>
<tr><th colspan="3">Steese SRMA - RMZ 9 - Clums</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide hunting, photography, wildlife viewing, and OHV use opportunities for users who desire a recreation experience characterized by self-reliance, challenge, and a lower degree of risk in a Middlecountry Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting; Photography; Wildlife viewing; OHV use</td><td>Primary: Escaping crowds; Escaping personal pressures; Experiencing nature</td><td>Personal: Enhanced sense of personal freedom; Greater connection with nature
Community/Social: Greater community involvement in the land use planning process
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for both non-motorized (hunting, photography and wildlife viewing) and motorized (OHV use) opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local users seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to provide a greater level of involvement with BLM's planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Cross-country summer use of OHVs 1,000 pounds curb weight and less would be allowed May 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

H.2.4. Steese Alternative E

The following tables outline management decisions and objectives for each RMZ in the Steese SRMA under Alternative E. The SRMA is divided into nine RMZs under this alternative, which are listed below and displayed on Map 52. Alternative E includes the following RMZs:

- RMZ 1, Birch Creek
- RMZ 2, Pinnell Mountain Trail
- RMZ 3, Mount Prindle Research Natural Area
- RMZ 4, Big Windy Research Natural Area
- RMZ 5, Preacher Creek
- RMZ 6, Harrison Creek
- RMZ 7, Wolf Creek
- RMZ 8, Clums
- RMZ 9, Bachelor Creek

Table H.51. Alternative E, Birch Creek Recreation Management Zone 1

<table>
<tr><th colspan="3">Steese SRMA - RMZ 1 -Birch Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, multi-day road accessible recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Semi-Primitive Interior Alaska setting, on one of America's nationally designated "Wild" Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating; Camping</td><td>Primary: Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things
Secondary: Testing your abilities</td><td>Personal: More exercise-oriented lifestyle; Greater connection with nature; Greater sense of adventure; Enhanced sense of competence
Community/Social: Greater awareness of minimal impact recreation; Greater opportunities for youth
Environmental: Heightened awareness of the natural world; Greater protection of fish and wildlife habitat
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage this zone for non-motorized float-boating and river camping opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to national, state and local float-boaters seeking a Semi-Primitive river recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Leave No Trace program.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.52. Alternative E, Pinnell Mountain, Recreation Management Zone 2

<table>
<tr><th colspan="3">Steese SRMA - RMZ 2 -Pinnell Mountain</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, backpacking (multi-day) and hiking (day use) opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting, on one of America's National Recreation Trails.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Backpacking; Hiking/walking</td><td>Primary: Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exercise/physical fitness</td><td>Personal: Improved outlook on life; Improved physical fitness; Improved mental health; Greater connection with nature; Enhanced sense of competence
Community/Social: Greater awareness of minimal impact recreation; Greater opportunities for youth
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized backpacking and hiking opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to national, state and local backpackers and hikers seeking a Primitive recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts by promoting the principles of the Leave No Trace program.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.53. Alternative E, Mt. Prindle Research Natural Area, Recreation Management Zone 3

<table>
<tr><th colspan="3">Steese SRMA - RMZ 3 - Mt. Prindle Research Natural Area</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, climbing, hunting and research opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Climbing; Hunting; Nature study (research)</td><td>Primary: Competence testing; Escaping crowds; Experiencing nature</td><td>Personal: Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Positive economic contributions to communities
Environmental: Heightened awareness of the natural world; Greater protection of distinctive natural landscapes
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized climbing, hunting and research opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, providing minimal facility development and visitor services, providing infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to climbers, hunters and researches seeking a Primitive recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.54. Alternative E, Big Windy Research Natural Area, Recreation Management Zone 4

<table>
<tr><th colspan="3">Steese SRMA - RMZ 4 -Big Windy Research Natural Area</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality research opportunities for users who desire an experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting containing an undeveloped hot springs system, uncommon and isolated plant species, and delicate geologic structures.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Nature study (research)</td><td>Primary: Competence testing; Escaping crowds; Experiencing nature</td><td>Personal: Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Greater community involvement in land use planning process
Environmental: Greater protection of distinctive natural landscapes</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized research opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to researches seeking a unique and scientific Primitive experience. Establish a relationship with stakeholders to increase community involvement with BLM's planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.55. Alternative E, Preacher Creek, Recreation Management Zone 5

<table>
<tr><th colspan="3">Steese SRMA - RMZ 5 - Preacher Creek</th></tr>
<tr><td colspan="3">SRMA DESCRIPTION</td></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality backpacking (multi-day), hiking and gold panning (day use) opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting.</td></tr>
<tr><td colspan="3">SRMA OBJECTIVE</td></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><td colspan="3">PRIMARY TARGETED OUTCOMES</td></tr>
<tr><td>Activities</td><td>Experiences</td><td>Benefits</td></tr>
<tr><td>Primary: Backpacking; Hiking/walking; Recreational Gold Panning</td><td>Primary: Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exploration of the area</td><td>Personal: Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Positive economic contributions to communities
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><td colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</td></tr>
<tr><td colspan="3">IMPLEMENTATION FRAMEWORK DECISION</td></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized backpacking, hiking, and gold panning opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local backpackers, hikers and gold panners seeking a Primitive recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.56. Alternative E, Harrison Creek, Recreation Management Zone 6

<table>
<tr><th colspan="3">Steese SRMA - RMZ 6 - Harrison Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide hunting, photography and wildlife viewing opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge, and risk in a Backcountry Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting, Photography, Wildlife viewing</td><td>Primary: Escaping crowds; Escaping personal pressures; Experiencing nature</td><td>Personal: Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Greater community involvement in the land use planning process
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage for hunting, photography and wildlife viewing opportunities. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, and by providing some additional facility development and visitor services, periodic social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local hunters, photographers and wildlife viewers seeking a Backcountry recreation experience. Establish a relationship with stakeholders to provide a greater level of involvement with BLM's planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.57. Alternative E, Wolf Creek, Recreation Management Zone 7

<table>
<tr><th colspan="3">Steese SRMA - RMZ 7 - Wolf Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide hunting, photography and wildlife viewing opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting; Photography; Wildlife; Viewing</td><td>Primary: Escaping personal pressures; Escaping crowds; Experiencing nature</td><td>Personal: Greater connection with nature; Enhanced sense of competence
Community/Social: Greater community involvement in the land use planning process
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized hunting, photography and wildlife viewing opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to national, state and local hunters, photographers and wildlife viewers seeking a Primitive recreation experience. Establish a relationship with stakeholders to increase community involvement in BLM's planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.58. Alternative E, Clums, Recreation Management Zone 8

<table>
<tr><th colspan="3">Steese SRMA - RMZ 8- Clums</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide hunting, photography, wildlife viewing, and OHV use opportunities for users who desire a recreation experience characterized by self-reliance, challenge, and a lower degree of risk in a Middlecountry Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hunting; Photography; Wildlife viewing; OHV use</td><td>Primary: Escaping crowds; Escaping personal pressures; Experiencing nature</td><td>Personal: Enhanced sense of personal freedom; Greater connection with nature
Community/Social: Greater community involvement in the land use planning process
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for both non-motorized (hunting, photography and wildlife viewing) and motorized (OHV use) opportunities. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local users seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to provide a greater level of involvement with BLM's planning process.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.59. Alternative E, Preacher Creek, Recreation Management Zone 9

<table>
<tr><th colspan="3">Steese SRMA - RMZ 9- Bachelor Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality backpacking (multi-day), hiking and gold panning (day use) opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Primitive Interior Alaska setting.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Backpacking; Hiking/walking; Recreational Gold Panning</td><td>Primary: Escaping personal pressures; Escaping crowds; Experiencing nature; Exploring new and different things; Exploration of the area</td><td>Personal: Improved outlook on life; Improved physical fitness; Greater connection with nature; Enhanced sense of personal freedom
Community/Social: Positive economic contributions to communities
Environmental: Heightened awareness of the natural world
Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized backpacking, hiking, and gold panning opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local backpackers, hikers and gold panners seeking a Primitive recreation experience. Establish a relationship with stakeholders to maintain positive economic contributions to local communities.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes, and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation: LIMITED Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

H.3. White Mountains Special Recreation Management Area

The White Mountains Special Recreation Management Area (SRMA) includes up to seven RMZs. The number and boundaries of RMZs vary by alternative, as does the management. Specific management for each RMZ is described in the tables in the following sections.

H.3.1. White Mountains Alternative B

The following tables outline management decisions and objectives for each RMZ in the White Mountains SRMA under Alternative B. The SRMA is divided into seven RMZs, which are listed below and displayed on Map 53.

- RMZ 1, Research Natural Areas and White Mountains Spine
- RMZ 2, White Mountains Highlands
- RMZ 3, Beaver Creek Corridor (management is the same under Alternatives B, C, and D)
- RMZ 4, Cache Mountain (management is the same under Alternatives B, C, and D)
- RMZ 5, White Mountains Foothills
- RMZ 6, Nome Creek
- RMZ 7, Wickersham/Blixt Cabin

Table H.60. Alternative B, Research Natural Areas and White Mountains Spine, Recreation Management Zone 1

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 1 - Research Natural Areas and White Mountains Spine</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, hiking, backpacking and hunting opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk, in a rugged, remote and Primitive Interior Alaska setting with amazing geologic and topographic features, which are not common in the region.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hiking; Backpacking; Hunting
Secondary: Dispersed camping</td><td>Primary: Escaping crowds; Enjoying scenery and natural landscape; Experiencing adventure
Secondary: Competence testing</td><td>Personal: Enhanced sense of personal freedom; Enhanced sense of competence
Community/Social: Heightened awareness of natural world
Environmental: Increased awareness and protection of natural landscapes</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized hiking, backpacking and hunting opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local hikers, backpackers and hunters seeking a Primitive recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the environment by promoting the principles of the Leave No Trace program.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less outside of the Serpentine Slide, Limestone Jag, and Mount Prindle RNA's would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. RNAs are closed to camping. Aircraft landings would be allowed within the Primitive Zone, with the following provisions: No clearing of vegetation would be allowed without a permit. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.61. Alternatives B and C, White Mountains Highlands, Recreation Management Zone 2

White Mountains SRMA - RMZ 2 - White Mountains Highlands		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality backpacking and hunting opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge and risk in a rugged, remote and Semi-Primitive Interior Alaska setting.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Backpacking; Hunting **Secondary:** Dispersed camping; Trapping; Snowmobiling	**Primary:** Escaping crowds; Enjoying scenery and natural landscape; Experiencing adventure **Secondary:** Competence testing	**Personal:** Enhanced sense of personal freedom; Enhanced sense of competence **Community/Social:** Heightened awareness of natural world **Environmental:** Increased awareness and protection of natural landscapes
Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage for backpacking and hunting opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.	
Information and Education	Provide outreach to state and local backpackers and hunters seeking a Semi-Primitive recreation experience. Establish a relationship with stakeholders to reduce negative impacts to the environment by promoting the principles of the Leave No Trace program.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.62. Alternatives B, C, and D, Beaver Creek, Recreation Management Zone 3

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 3 - Beaver Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, multi-day road accessible recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Semi-Primitive Interior Alaska setting, on one of America's nationally designated "Wild" Rivers.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Float boating; Camping

Secondary: Fishing; Hunting; Snowmobiling; Dog sledding; Skiing</td><td>Primary: Escaping crowds; Enjoying scenery and natural landscape; Experiencing adventure

Secondary: Escaping personal social pressures</td><td>Personal: Enhanced sense of personal freedom; Enhanced sense of competence

Community/Social: Heightened awareness of natural world

Environmental: Reduced negative human impacts such as litter, vegetative trampling, and unplanned trail construction

Economic: Increased local tourism revenue</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage for float boating and camping opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local float boaters seeking a Semi-Primitive river recreation experience. Establish a relationship with stakeholders to reduce negative impacts to the environment by promoting the principles of the Leave No Trace program.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be permissible through ANILCA 1110(a). Beaver Creek is classified as wild. Motorized boats launched at Nome Creek would be restricted to 15 horsepower or less. Hovercraft, airboats, and personal watercraft would be prohibited.
General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.63. Alternatives B, C, and D, Cache Mountain, Recreation Management Zone 4

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 4 - Cache Mountain</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality snowmobiling, dog mushing and skiing opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge, and risk with a unique opportunity to experience the rugged Alaskan Interior, with the added convenience of a maintained trail system and public use cabins.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>**Primary:** Snowmobiling; Dog mushing; Skiing; Staying at cabins
Secondary: Camping; Hiking; Hunting</td><td>**Primary:** Escaping personal social pressures; Escaping crowds; Enjoying scenery and natural landscape
Secondary: Experiencing adventure</td><td>**Personal:** Greater connection with nature; Improved mental health
Community/Social: Greater community ownership and stewardship of park, recreation, and natural resources.
Environmental: Heightened awareness of natural world
Economic: Increased desirability as a place to live/retire</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>**Management**</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage for snowmobiling, dog mushing and skiing opportunities in conjunction with a well maintained trails and cabins system. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, and by providing some additional facility development and visitor services, periodic social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>**Information and Education**</td><td colspan="2">Provide outreach to local snowmobilers, dog mushers and skiers seeking a Backcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>**Monitoring**</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>**Administrative**</td><td colspan="2">Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.64. Alternative B, White Mountains Foothills, Recreation Management Zone 5

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 5 - White Mountains Foothills</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality snowmobiling, dog mushing and skiing opportunities for users who desire a recreation experience characterized by solitude, self-reliance and a moderate degree of challenge and risk with a unique opportunity to experience the rugged Alaskan Interior, with the added convenience of a well maintained trail system and public use cabins located closer to major access points.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Snowmobiling; Dog mushing; Skiing; Staying at cabins

Secondary: Camping; Hiking; Hunting; OHV use</td><td>Primary: Escaping personal social pressures; Escaping crowds; Enjoying scenery and natural landscape

Secondary: Experiencing adventure</td><td>Personal: Greater connection with nature; Improved mental health
Community/Social: Greater community ownership and stewardship of park, recreation, and natural resources.
Environmental: Heightened awareness of natural world
Economic: Increased desirability as a place to live/retire</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for snowmobiling, dog mushing and skiing opportunities in conjunction with a well maintained trails and cabins system in closer proximity to major access points. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to local snowmobilers, dog mushers and skiers seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 curb weight and less would be allowed October 15 to April 30. Summer use of ATVs would be allowed May 1 to October 14 to vehicles 50” and less, weighing 1,000 pounds curb weight and less, on designated roads and trails only (except for the Wickersham Creek Trail, from the Elliott Highway to the intersection with the 23.5 mile trail, which is open from June 1 to October 14) (Appendix B, <i>Travel Management Plan: White Mountains</i> and Map 53). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.65. Alternative B, Nome Creek, Recreation Management Zone 6

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 6 - Nome Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide opportunities for Frontcountry recreation experiences that are characterized by the opportunity to affiliate with other users in an area that is generally natural in appearance, yet contains developed recreation sites and is easily accessible for local families and groups via an improved road system.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Camping; Sightseeing; Berry picking; Hiking; Hunting; OHV use; Fishing
Secondary: Gold panning; Snowmobiling; Dog mushing</td><td>Primary: Enjoying having easy access to natural landscapes; Enjoying the closeness of friends and family; Relishing group affiliation and togetherness
Secondary: Escaping crowds; Experiencing adventure</td><td>Personal: Greater connection with nature; improved mental health
Community/Social: Heightened awareness of natural world
Environmental: Greater community ownership and stewardship of park, recreation, and natural resources
Economic: Increased desirability as a place to live and retire</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for developed camping, sightseeing, berry picking, hiking, hunting, OHV use, and fishing. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to local campers, sightseers, berry pickers, hikers, hunters, OHV users and fishermen/women seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of ATVs would be allowed May 1 to October 14 to vehicles 50” and less, weighing 1,000 pounds curb weight and less, on designated roads and trails only (Appendix B, <i>Travel Management Plan: White Mountains</i> and Map 53). A permit or Plan of Operations would be required for all other OHV use. Aircraft use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.66. Alternative B, Wickersham Dome-Blixt Cabin, Recreation Management Zone 7

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 7 - Wickersham Dome/Blixt Cabin</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide opportunities for Frontcountry recreation experiences that are characterized by uncomplicated recreation opportunities in an area that contains both developed and undeveloped recreation sites, but is easily accessible for users via an improved road system.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Hiking; Skiing; Berry picking

Secondary: Camping; OHV use; Dog mushing</td><td>Primary: Enjoying having easy access to natural landscapes; Enjoying the closeness of friends and family; Exercising - achieving personal fitness</td><td>Personal: Greater connection with nature; improved mental health
Community/Social: Heightened awareness of natural world
Environmental: Greater community ownership and stewardship of park, recreation, and natural resources
Economic: Increased desirability as a place to live and retire</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for hiking, skiing and berry picking. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to local hikers, skiers and berry pickers seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities and targeted outcomes.
<u>OHV area designation = LIMITED</u> All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of ATVs would be allowed May 1 to October 14 to vehicles 50” and less, weighing 1,000 pounds curb weight and less, on designated roads and trails only (except for the Wickersham Creek Trail, from Mile 28 Elliott Highway to the intersection with the 23.5 mile trail, which is open from June 1 to October 14) (Appendix B, <i>Travel Management Plan: White Mountains</i> and Map 53). A permit or Plan of Operations would be required for all other OHV use. Aircraft use would be unrestricted.
<u>General</u> Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

H.3.2. White Mountains Alternative C

The following tables outline management decisions and objectives for each RMZ in the White Mountains SRMA under Alternative C. The SRMA is divided into seven RMZs under this alternative, which are listed below and displayed on Map 54. Tables for RMZs where management is the same as an earlier alternative are not displayed in this section (e.g., RMZs two to four).

- RMZ 1, Research Natural Areas and White Mountains Spine
- RMZ 2, White Mountains Highlands (Same as Alternative B, Table H.61, “Alternatives B and C, White Mountains Highlands, Recreation Management Zone 2”)
- RMZ 3, Beaver Creek Corridor (Same as Alternative B, Table H.62, “Alternatives B, C, and D, Beaver Creek, Recreation Management Zone 3”)
- RMZ 4, Cache Mountain (Same as Alternative B, Table H.63, “Alternatives B, C, and D, Cache Mountain, Recreation Management Zone 4”)
- RMZ 5, White Mountains Foothills
- RMZ 6, Nome Creek
- RMZ 7, Wickersham/Blixt Cabin

Table H.67. Alternatives C and D, Research Natural Areas and White Mountains Spine, Recreation Management Zone 1

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 1 - Research Natural Areas and White Mountains Spine</th></tr>
<tr><td colspan="3">SRMA DESCRIPTION</td></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, hiking, backpacking and hunting opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk, in a rugged, remote and Primitive Interior Alaska setting with amazing geologic and topographic features, which are not common in the region.</td></tr>
<tr><td colspan="3">SRMA OBJECTIVE</td></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><td colspan="3">PRIMARY TARGETED OUTCOMES</td></tr>
<tr><td>Activities</td><td>Experiences</td><td>Benefits</td></tr>
<tr><td>Primary: Hiking; Backpacking; Hunting

Secondary: Dispersed camping</td><td>Primary: Escaping crowds; Enjoying scenery and natural landscape; Experiencing adventure

Secondary: Competence testing</td><td>Personal: Enhanced sense of personal freedom; Enhanced sense of competence

Community/Social: Heightened awareness of natural world

Environmental: Increased awareness and protection of natural landscapes</td></tr>
<tr><td colspan="3">Recreation Setting Character Description - PRIMITIVE (Table 2.5)</td></tr>
<tr><td colspan="3">IMPLEMENTATION FRAMEWORK DECISION</td></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized hiking, backpacking and hunting opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local hikers, backpackers and hunters seeking a Primitive recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the environment by promoting the principles of the Leave No Trace program.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less outside of the Serpentine Slide, Limestone Jag, and Mount Prindle RNA's would be allowed October 15 to April 30. A permit or Plan of Operations would be required for all other OHV use. Aircraft landings would be allowed within the Primitive Zone, with the following provisions: No clearing of vegetation would be allowed without a permit. Primitive camping and hiking trails would be allowed in the RNAs.
General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.68. Alternative C, White Mountains Foothills, Recreation Management Zone 5

<table>
<tr><th colspan="6">White Mountains SRMA - RMZ 5 - White Mountains Foothills</th></tr>
<tr><th colspan="6">SRMA DESCRIPTION</th></tr>
<tr><td colspan="6">The focus this zone would be to provide high quality snowmobiling, dog mushing and skiing opportunities for users who desire a recreation experience characterized by solitude, self-reliance and a moderate degree of challenge and risk with a unique opportunity to experience the rugged Alaskan Interior, with the added convenience of a well maintained trail system and public use cabins located closer to major access points.</td></tr>
<tr><th colspan="6">SRMA OBJECTIVE</th></tr>
<tr><td colspan="6">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="6">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th colspan="2">Activities</th><th colspan="2">Experiences</th><th colspan="2">Benefits</th></tr>
<tr><td colspan="2">Primary: Snowmobiling; Dog mushing; Skiing; Staying at cabins

Secondary: Camping; Hiking; Hunting; OHV use</td><td colspan="2">Primary: Escaping personal social pressures; Escaping crowds; Enjoying scenery and natural landscape

Secondary: Experiencing adventure</td><td colspan="2">Personal: Greater connection with nature; Improved mental health
Community/Social: Greater community ownership and stewardship of park, recreation, and natural resources.
Environmental: Heightened awareness of natural world
Economic: Increased desirability as a place to live/retire</td></tr>
<tr><th colspan="6">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="6">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="5">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for snowmobiling, dog mushing and skiing opportunities in conjunction with a well maintained trails and cabins system in closer proximity to major access points. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="5">Provide outreach to local snowmobilers, dog mushers and skiers seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>Monitoring</td><td colspan="5">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="5">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of ATVs would be allowed May 1 to October 14 to vehicles 50” and less, weighing 1,000 pounds curb weight and less, on designated roads and trails only, except for game retrieval . The Wickersham Creek Trail, from Mile 28 Elliott Highway to the intersection with the 23.5 mile trail, is open for summer use of OHVs 1,500 pounds curb weight and less from June 1 to October 14. UTVs would be allowed on Quartz Creek, Wickersham Creek, and 23.5 mile trails only (Appendix B and Map 54). A permit or Plan of Operations would be required for all other OHV use. Aircraft and motorboat use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.69. Alternative C, Nome Creek, Recreation Management Zone 6

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 6 - Nome Creek</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide opportunities for Frontcountry recreation experiences that are characterized by the opportunity to affiliate with other users in an area that is generally natural in appearance, yet contains developed recreation sites and is easily accessible for local families and groups via an improved road system.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>Primary: Camping; Sightseeing; Berry picking; Hiking; Hunting; OHV use; Fishing

Secondary: Gold panning; Snowmobiling; Dog mushing</td><td>Primary: Enjoying having easy access to natural landscapes; Enjoying the closeness of friends and family; Relishing group affiliation and togetherness

Secondary: Escaping crowds; Experiencing adventure</td><td>Personal: Greater connection with nature; improved mental health
Community/Social: Heightened awareness of natural world
Environmental: Greater community ownership and stewardship of park, recreation, and natural resources
Economic: Increased desirability as a place to live and retire</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for developed camping, sightseeing, berry picking, hiking, hunting, OHV use, and fishing. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to local campers, sightseers, berry pickers, hikers, hunters, OHV users and fishermen/women seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 curb weight and less would be allowed October 15 to April 30. Summer use of ATVs would be allowed May 1 to October 14 to vehicles 50” and less, weighing 1,000 pounds curb weight and less, on designated roads and trails only, except for game retrieval and in tailings area (Appendix B, <i>Travel Management Plan: White Mountains</i> and Map 54). UTVs would be allowed on the Quartz Creek Trail. A permit or Plan of Operations would be required for all other OHV use. Aircraft use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.70. Alternative C, Wickersham-Blixt Cabin, Recreation Management Zone 7

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 7 - Wickersham and Blixt Cabin</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide opportunities for Frontcountry recreation experiences that are characterized by uncomplicated recreation opportunities in an area that contains both developed and undeveloped recreation sites, but is easily accessible for users via an improved road system.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>**Primary:** Hiking; Skiing; Berry picking
Secondary: Camping; OHV use; Dog mushing</td><td>**Primary:** Enjoying having easy access to natural landscapes; Enjoying the closeness of friends and family; Exercising - achieving personal fitness</td><td>**Personal:** Greater connection with nature; improved mental health
Community/Social: Heightened awareness of natural world
Environmental: Greater community ownership and stewardship of park, recreation, and natural resources
Economic: Increased desirability as a place to live and retire</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>**Management**</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for hiking, skiing and berry picking. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>**Information and Education**</td><td colspan="2">Provide outreach to local hikers, skiers and berry pickers seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>**Monitoring**</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>**Administrative**</td><td colspan="2">Apply administrative actions to create and maintain Frontcountry recreation opportunities and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of ATVs would be allowed May 1 to October 14 to vehicles 50” and less, weighing 1,000 pounds curb weight and less, on designated roads and trails only, except for retrieval of legally harvested game. The Wickersham Creek Trail, from Mile 28 Elliott Highway to the intersection with the 23.5 mile trail, is open for summer use of OHVs 1,500 pounds curb weight and less from June 1 to October 14. UTVs would be allowed on Wickersham Creek, and 23.5 mile trails only (Appendix B, *Travel Management Plan: White Mountains* and Map 54). A permit or Plan of Operations would be required for all other OHV use. Aircraft use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

H.3.3. White Mountains Alternative D

The following tables outline management decisions and objectives for each RMZ in the White Mountains SRMA under Alternative D. The SRMA is divided into six RMZs, which are listed below and displayed on Map 55. Tables for RMZs where management is the same as an earlier alternative are not displayed in this section (e.g., RMZs one, three, and four).

- RMZ 1, Research Natural Areas (Same as Alternative C, Table H.67, "Alternatives C and D, Research Natural Areas and White Mountains Spine, Recreation Management Zone 1")
- RMZ 3, Beaver Creek Corridor (Same as Alternative B, Table H.62, "Alternatives B, C, and D, Beaver Creek, Recreation Management Zone 3")
- RMZ 4, Cache Mountain (Same as Alternative B, Table H.63, "Alternatives B, C, and D, Cache Mountain, Recreation Management Zone 4"
- RMZ 5, White Mountains Foothills
- RMZ 6, Nome Creek
- RMZ 7, Wickersham/Blixt Cabin

Table H.71. Alternative D, White Mountains Foothills, Recreation Management Zone 5

<table>
<tr><th colspan="6">White Mountains SRMA - RMZ 5 - White Mountains Foothills</th></tr>
<tr><th colspan="6">SRMA DESCRIPTION</th></tr>
<tr><td colspan="6">The focus this zone would be to provide high quality snowmobiling, dog mushing and skiing opportunities for users who desire a recreation experience characterized by solitude, self-reliance and a moderate degree of challenge and risk with a unique opportunity to experience the rugged Alaskan Interior, with the added convenience of a well maintained trail system and public use cabins located closer to major access points.</td></tr>
<tr><th colspan="6">SRMA OBJECTIVE</th></tr>
<tr><td colspan="6">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="6">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th colspan="2">Activities</th><th colspan="2">Experiences</th><th colspan="2">Benefits</th></tr>
<tr><td colspan="2">Primary: Snowmobiling; Dog mushing; Skiing; Staying at cabins

Secondary: Camping; Hiking; Hunting; OHV use</td><td colspan="2">Primary: Escaping personal social pressures; Escaping crowds; Enjoying scenery and natural landscape

Secondary: Experiencing adventure</td><td colspan="2">Personal: Greater connection with nature; Improved mental health
Community/Social: Greater community ownership and stewardship of park, recreation, and natural resources.
Environmental: Heightened awareness of natural world
Economic: Increased desirability as a place to live/retire</td></tr>
<tr><th colspan="6">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="6">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="5">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for snowmobiling, dog mushing and skiing opportunities in conjunction with a well maintained trails and cabins system in closer proximity to major access points. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="5">Provide outreach to local snowmobilers, dog mushers and skiers seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>Monitoring</td><td colspan="5">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="5">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of ATVs would be allowed May 1 to October 14 to vehicles 50” and less, weighing 1,000 pounds curb weight and less except on the Summit and Ski Loop trails and within the Wickersham Creek Closed Area. UTVs would be allowed on designated trails only (Appendix B and Map 55). The Wickersham Creek Trail, from Mile 28 Elliott Highway to the intersection with the 23.5 mile trail, is open for summer use of OHVs 1,500 pounds curb weight and less from June 1 to October 14. A permit or Plan of Operations would be required for all other OHV use. Aircraft use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.72. Alternative D, Nome Creek, Recreation Management Zone 6

<table>
<tr><th colspan="4">White Mountains SRMA - RMZ 6 - Nome Creek</th></tr>
<tr><td colspan="4">SRMA DESCRIPTION</td></tr>
<tr><td colspan="4">The focus this zone would be to provide opportunities for Frontcountry recreation experiences that are characterized by the opportunity to affiliate with other users in an area that is generally natural in appearance, yet contains developed recreation sites and is easily accessible for local families and groups via an improved road system.</td></tr>
<tr><td colspan="4">SRMA OBJECTIVE</td></tr>
<tr><td colspan="4">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><td colspan="4">PRIMARY TARGETED OUTCOMES</td></tr>
<tr><td>Activities</td><td colspan="2">Experiences</td><td>Benefits</td></tr>
<tr><td>Primary: Camping; Sightseeing; Berry picking; Hiking; Hunting; OHV use; Fishing

Secondary: Gold panning; Snowmobiling; Dog mushing</td><td colspan="2">Primary: Enjoying having easy access to natural landscapes; Enjoying the closeness of friends and family; Relishing group affiliation and togetherness

Secondary: Escaping crowds; Experiencing adventure</td><td>Personal: Greater connection with nature; improved mental health
Community/Social: Heightened awareness of natural world
Environmental: Greater community ownership and stewardship of park, recreation, and natural resources
Economic: Increased desirability as a place to live and retire</td></tr>
<tr><td colspan="4">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</td></tr>
<tr><td colspan="4">IMPLEMENTATION FRAMEWORK DECISION</td></tr>
<tr><td colspan="2">Management</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for developed camping, sightseeing, berry picking, hiking, hunting, OHV use, and fishing. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td colspan="2">Information and Education</td><td colspan="2">Provide outreach to local campers, sightseers, berry pickers, hikers, hunters, OHV users and fishermen/women seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td colspan="2">Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td colspan="2">Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of ATVs would be allowed May 1 to October 14 to vehicles 50" and less, weighing 1,000 pounds curb weight and less, on designated roads and trails only, except for game retrieval and in tailings area. UTVs would be allowed on roads, tailings area, and designated trails only (Appendix B and Map 55). A permit or Plan of Operations would be required for all other OHV use. Aircraft use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.73. Alternative D, Wickersham Dome-Blixt Cabin, Recreation Management Zone 7

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 7 - Wickersham Dome/Blixt Cabin</th></tr>
<tr><th colspan="3">SRMA DESCRIPTION</th></tr>
<tr><td colspan="3">The focus this zone would be to provide opportunities for Frontcountry recreation experiences that are characterized by uncomplicated recreation opportunities in an area that contains both developed and undeveloped recreation sites, but is easily accessible for users via an improved road system.</td></tr>
<tr><th colspan="3">SRMA OBJECTIVE</th></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="3">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th>Activities</th><th>Experiences</th><th>Benefits</th></tr>
<tr><td>**Primary:** Hiking; Skiing; Berry picking
Secondary: Camping; OHV use; Dog mushing</td><td>**Primary:** Enjoying having easy access to natural landscapes; Enjoying the closeness of friends and family; Exercising - achieving personal fitness</td><td>**Personal:** Greater connection with nature; improved mental health
Community/Social: Heightened awareness of natural world
Environmental: Greater community ownership and stewardship of park, recreation, and natural resources
Economic: Increased desirability as a place to live and retire</td></tr>
<tr><th colspan="3">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="3">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>**Management**</td><td colspan="2">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for hiking, skiing and berry picking. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>**Information and Education**</td><td colspan="2">Provide outreach to local hikers, skiers and berry pickers seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>**Monitoring**</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>**Administrative**</td><td colspan="2">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities and targeted outcomes.
OHV area designation = LIMITED All forms of non-motorized use would be allowed. Cross-country winter use of snowmobiles 1,000 pounds curb weight and less would be allowed October 15 to April 30. Summer use of ATVs would be allowed May 1 to October 14 to vehicles 50” and less, weighing 1,000 pounds curb weight and less (except for the Wickersham Creek Trail, from Mile 28 Elliott Highway to the intersection with the 23.5 mile Trail, which is open June 1 to October 14). UTVs would be allowed on designated trails only and would abide by the same dates (Appendix B and Map 55). A permit or Plan of Operations would be required for all other OHV use. Aircraft use would be unrestricted.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

H.3.4. White Mountains Alternative E

The following tables outline management decisions and objectives for each RMZ in the White Mountains SRMA under Alternative E. The SRMA is divided into seven RMZs, which are listed below and displayed on Map 56.

- RMZ 1, Research Natural Areas and White Mountains Spine
- RMZ 2, White Mountains Highlands
- RMZ 3, Beaver Creek Corridor
- RMZ 4, Cache Mountain
- RMZ 5, White Mountains Foothills
- RMZ 6, Nome Creek
- RMZ 7, Wickersham/Blixt Cabin

Table H.74. Alternative E, Research Natural Areas and White Mountains Spine, Recreation Management Zone 1

White Mountains SRMA - RMZ 1 - Research Natural Areas and White Mountains Spine		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality, hiking, backpacking and hunting opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk, in a rugged, remote and Primitive Interior Alaska setting with amazing geologic and topographic features, which are not common in the region.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Hiking; Backpacking; Hunting **Secondary:** Dispersed camping	**Primary:** Escaping crowds; Enjoying scenery and natural landscape; Experiencing adventure **Secondary:** Competence testing	**Personal:** Enhanced sense of personal freedom; Enhanced sense of competence **Community/Social:** Heightened awareness of natural world **Environmental:** Increased awareness and protection of natural landscapes
Recreation Setting Character Description - PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Primitive classification. The primary focus would be to manage for non-motorized hiking, backpacking and hunting opportunities. Emphasis would be placed on providing Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, rare social encounters, restricted mechanized/motorized use, and rare administrative presence.	
Information and Education	Provide outreach to state and local hikers, backpackers and hunters seeking a Primitive recreation experience. Establish a relationship with stakeholders to reduce negative environmental impacts to the environment by promoting the principles of the Leave No Trace program.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Primitive recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED. Travel management plan will be completed within 5 years of the ROD. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.75. Alternative E, White Mountains Highlands, Recreation Management Zone 2

White Mountains SRMA - RMZ 2 - White Mountains Highlands		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality backpacking and hunting opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge and risk in a rugged, remote and Semi-Primitive Interior Alaska setting.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Backpacking; Hunting **Secondary:** Dispersed camping; Trapping; Snowmobiling	**Primary:** Escaping crowds; Enjoying scenery and natural landscape; Experiencing adventure **Secondary:** Competence testing	**Personal:** Enhanced sense of personal freedom; Enhanced sense of competence **Community/Social:** Heightened awareness of natural world **Environmental:** Increased awareness and protection of natural landscapes
Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage for backpacking and hunting opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.	
Information and Education	Provide outreach to state and local backpackers and hunters seeking a Semi-Primitive recreation experience. Establish a relationship with stakeholders to reduce negative impacts to the environment by promoting the principles of the Leave No Trace program.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions, based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED. Travel management plan will be completed within 5 years of the ROD. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.76. Alternative E, Beaver Creek, Recreation Management Zone 3

<table>
<tr><th colspan="3">White Mountains SRMA - RMZ 3 - Beaver Creek</th></tr>
<tr><td colspan="3">SRMA DESCRIPTION</td></tr>
<tr><td colspan="3">The focus this zone would be to provide high quality, multi-day road accessible recreational float boat opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge and risk in a Semi-Primitive Interior Alaska setting, on one of America’s nationally designated “Wild” Rivers.</td></tr>
<tr><td colspan="3">SRMA OBJECTIVE</td></tr>
<tr><td colspan="3">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><td colspan="3">PRIMARY TARGETED OUTCOMES</td></tr>
<tr><td>Activities</td><td>Experiences</td><td>Benefits</td></tr>
<tr><td>Primary: Float boating; Camping
Secondary: Fishing; Hunting; Snowmobiling; Dog sledding; Skiing</td><td>Primary: Escaping crowds; Enjoying scenery and natural landscape; Experiencing adventure
Secondary: Escaping personal social pressures</td><td>Personal: Enhanced sense of personal freedom; Enhanced sense of competence
Community/Social: Heightened awareness of natural world
Environmental: Reduced negative human impacts such as litter, vegetative trampling, and unplanned trail construction
Economic: Increased local tourism revenue</td></tr>
<tr><td colspan="3">Recreation Setting Character Description - SEMI-PRIMITIVE (Table 2.5)</td></tr>
<tr><td colspan="3">IMPLEMENTATION FRAMEWORK DECISION</td></tr>
<tr><td>Management</td><td colspan="2">The rivers and creeks within this zone would be managed to protect and enhance the qualities and characteristics that are found within a Semi-Primitive classification. The primary focus would be to manage for float boating and camping opportunities. Emphasis would be placed on providing Semi-Primitive recreation experiences by maintaining the naturally-appearing landscape, and by providing minimal facility development and visitor services, infrequent social encounters, restricted mechanized/motorized use, and minimal administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="2">Provide outreach to state and local float boaters seeking a Semi-Primitive river recreation experience. Establish a relationship with stakeholders to reduce negative impacts to the environment by promoting the principles of the Leave No Trace program.</td></tr>
<tr><td>Monitoring</td><td colspan="2">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions, based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="2">Apply administrative actions as needed to create and maintain Semi-Primitive recreation opportunities and targeted outcomes.
OHV area designation = LIMITED. Travel management plan will be completed within 5 years of the ROD. Beaver Creek is classified as wild. Motorized boats launched at Nome Creek would be restricted to 15 horsepower or less.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.77. Alternative E, Cache Mountain, Recreation Management Zone 4

White Mountains SRMA - RMZ 4 - Cache Mountain		
SRMA DESCRIPTION		
The focus this zone would be to provide high quality snowmobiling, dog mushing and skiing opportunities for users who desire a recreation experience characterized by solitude, self-reliance, challenge, and risk with a unique opportunity to experience the rugged Alaskan Interior, with the added convenience of a maintained trail system and public use cabins.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Snowmobiling; Dog mushing; Skiing; Staying at cabins **Secondary:** Camping; Hiking; Hunting	**Primary:** Escaping personal social pressures; Escaping crowds; Enjoying scenery and natural landscape **Secondary:** Experiencing adventure	**Personal:** Greater connection with nature; Improved mental health **Community/Social:** Greater community ownership and stewardship of park, recreation, and natural resources. **Environmental:** Heightened awareness of natural world **Economic:** Increased desirability as a place to live/retire
Recreation Setting Character Description - BACKCOUNTRY (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Backcountry classification. The primary focus would be to manage for snowmobiling, dog mushing and skiing opportunities in conjunction with a well maintained trails and cabins system. Emphasis would be placed on providing Backcountry recreation experiences by maintaining the naturally-appearing landscape, and by providing some additional facility development and visitor services, periodic social encounters, restricted mechanized/motorized use, and periodic administrative presence.	
Information and Education	Provide outreach to local snowmobilers, dog mushers and skiers seeking a Backcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Backcountry recreation opportunities, and targeted outcomes. OHV area designation = LIMITED. Travel management plan will be completed within 5 years of the ROD. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

Table H.78. Alternative E, White Mountains Foothills, Recreation Management Zone 5

<table>
<tr><th colspan="6">White Mountains SRMA - RMZ 5 - White Mountains Foothills</th></tr>
<tr><th colspan="6">SRMA DESCRIPTION</th></tr>
<tr><td colspan="6">The focus this zone would be to provide high quality snowmobiling, dog mushing and skiing opportunities for users who desire a recreation experience characterized by solitude, self-reliance and a moderate degree of challenge and risk with a unique opportunity to experience the rugged Alaskan Interior, with the added convenience of a well maintained trail system and public use cabins located closer to major access points.</td></tr>
<tr><th colspan="6">SRMA OBJECTIVE</th></tr>
<tr><td colspan="6">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="6">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th colspan="2">Activities</th><th colspan="2">Experiences</th><th colspan="2">Benefits</th></tr>
<tr><td colspan="2">Primary: Snowmobiling; Dog mushing; Skiing; Staying at cabins

Secondary: Camping; Hiking; Hunting; OHV use</td><td colspan="2">Primary: Escaping personal social pressures; Escaping crowds; Enjoying scenery and natural landscape

Secondary: Experiencing adventure</td><td colspan="2">Personal: Greater connection with nature; Improved mental health
Community/Social: Greater community ownership and stewardship of park, recreation, and natural resources.
Environmental: Heightened awareness of natural world
Economic: Increased desirability as a place to live/retire</td></tr>
<tr><th colspan="6">Recreation Setting Character Description - MIDDLECOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="6">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="5">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Middlecountry classification. The primary focus would be to manage for snowmobiling, dog mushing and skiing opportunities in conjunction with a well maintained trails and cabins system in closer proximity to major access points. Emphasis would be placed on providing Middlecountry recreation experiences by maintaining the partially modified yet generally naturally-appearing landscape, and by providing moderate levels of facility development, visitor services and social encounters, restricted mechanized/motorized use, and periodic administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="5">Provide outreach to local snowmobilers, dog mushers and skiers seeking a Middlecountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>Monitoring</td><td colspan="5">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="5">Apply administrative actions as needed to create and maintain Middlecountry recreation opportunities, targeted outcome, and setting character.
OHV area designation = LIMITED. Travel management plan will be completed within 5 years of the ROD.
General: Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.79. Alternative E, Nome Creek, Recreation Management Zone 6

<table>
<tr><th colspan="6">White Mountains SRMA - RMZ 6 - Nome Creek</th></tr>
<tr><th colspan="6">SRMA DESCRIPTION</th></tr>
<tr><td colspan="6">The focus this zone would be to provide opportunities for Frontcountry recreation experiences that are characterized by the opportunity to affiliate with other users in an area that is generally natural in appearance, yet contains developed recreation sites and is easily accessible for local families and groups via an improved road system.</td></tr>
<tr><th colspan="6">SRMA OBJECTIVE</th></tr>
<tr><td colspan="6">Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)</td></tr>
<tr><th colspan="6">PRIMARY TARGETED OUTCOMES</th></tr>
<tr><th colspan="2">Activities</th><th colspan="2">Experiences</th><th colspan="2">Benefits</th></tr>
<tr><td colspan="2">Primary: Camping; Sightseeing; Berry picking; Hiking; Hunting; OHV use; Fishing

Secondary: Gold panning; Snowmobiling; Dog mushing</td><td colspan="2">Primary: Enjoying having easy access to natural landscapes; Enjoying the closeness of friends and family; Relishing group affiliation and togetherness

Secondary: Escaping crowds; Experiencing adventure</td><td colspan="2">Personal: Greater connection with nature; improved mental health
Community/Social: Heightened awareness of natural world
Environmental: Greater community ownership and stewardship of park, recreation, and natural resources
Economic: Increased desirability as a place to live and retire</td></tr>
<tr><th colspan="6">Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)</th></tr>
<tr><th colspan="6">IMPLEMENTATION FRAMEWORK DECISION</th></tr>
<tr><td>Management</td><td colspan="5">This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for developed camping, sightseeing, berry picking, hiking, hunting, OHV use, and fishing. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.</td></tr>
<tr><td>Information and Education</td><td colspan="5">Provide outreach to local campers, sightseers, berry pickers, hikers, hunters, OHV users and fishermen/women seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.</td></tr>
<tr><td>Monitoring</td><td colspan="5">Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.</td></tr>
<tr><td>Administrative</td><td colspan="5">Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, targeted outcomes and setting character.
OHV area designation = LIMITED. Travel management plan will be completed within 5 years of the ROD.
General Special Recreation Permits could be issued in conformance with BLM guidance.
New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.</td></tr>
</table>

Table H.80. Alternative E, Wickersham-Blixt Cabin, Recreation Management Zone 7

White Mountains SRMA - RMZ 7 - Wickersham and Blixt Cabin		
SRMA DESCRIPTION		
The focus this zone would be to provide opportunities for Frontcountry recreation experiences that are characterized by uncomplicated recreation opportunities in an area that contains both developed and undeveloped recreation sites, but is easily accessible for users via an improved road system.		
SRMA OBJECTIVE		
Participants in visitor assessments report an average 4.0 realization of the targeted experience and benefit outcomes listed below. (4.0 on a probability scale where: 1= not at all realized and 5= totally realized)		
PRIMARY TARGETED OUTCOMES		
Activities	**Experiences**	**Benefits**
Primary: Hiking; Skiing; Berry picking **Secondary:** Camping; OHV use; Dog mushing	**Primary:** Enjoying having easy access to natural landscapes; Enjoying the closeness of friends and family; Exercising - achieving personal fitness	**Personal:** Greater connection with nature; improved mental health **Community/Social:** Heightened awareness of natural world **Environmental:** Greater community ownership and stewardship of park, recreation, and natural resources **Economic:** Increased desirability as a place to live and retire
Recreation Setting Character Description - FRONTCOUNTRY (Table 2.5)		
IMPLEMENTATION FRAMEWORK DECISION		
Management	This zone would be managed to protect and enhance the qualities and characteristics that are found within a Frontcountry classification. The primary focus would be to manage for hiking, skiing and berry picking. Emphasis would be placed on providing Frontcountry recreation experiences by maintaining the partially modified landscape, and by providing improved yet modest levels of facility development and visitor services, a routine level of social encounters, restricted mechanized/motorized use, and routine administrative presence.	
Information and Education	Provide outreach to local hikers, skiers and berry pickers seeking a Frontcountry recreation experience. Establish a relationship with stakeholders to increase community ownership and stewardship of park, recreation and natural resources.	
Monitoring	Monitor and evaluate visitor satisfaction including niche decisions, targeted outcomes and setting character decisions based on Recreation Management Zone objectives and prescriptions.	
Administrative	Apply administrative actions as needed to create and maintain Frontcountry recreation opportunities, targeted outcomes and setting character. OHV area designation = LIMITED. Travel management plan will be completed within 5 years of the ROD. General Special Recreation Permits could be issued in conformance with BLM guidance. New restrictions and/or facilities could be developed for the purposes of site protection, visitor safety, and/or enhancing targeted outcomes and setting character.	

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Appendix I

Fisheries and Aquatic Resources

Appendix I. Fisheries and Aquatic Resources

I.1. Watershed Classification

Watersheds within the Eastern Interior Planning Area were categorized as either conservation or restoration watersheds. Within these two categories, BLM Alaska evaluated and prioritized watersheds based on ten factors developed by the fisheries program staff and based on fisheries science, BLM policy, and law. One of the key policy considerations is outlined in BLM Instruction Memorandum (IM) 2009-141, which outlines BLM's commitment to the National Fish Habitat Action Plan that established four goals:

1. Protect and maintain intact and healthy aquatic systems.
2. Prevent further degradation of fish habitats that have been adversely affected.
3. Reverse declines in the quality and quantity of aquatic habitats to improve the overall health of fish and other aquatic organisms.
4. Increase the quality and quantity of fish habitats that support a broad natural diversity of fish and other aquatic species.

This programmatic approach is consistent with the National Fish Habitat Action Plan goals and provides managers and the public with a clear understanding of fisheries resource values and their spatial arrangement within the planning area. Management emphasis remains long-term, recognizing that short-term impacts may be acceptable as long as they will have discountable or negligible effects on the condition indicators, and will not preclude the long-term improvement of fisheries habitat conditions. If watershed processes are to be restored over time, it is critical that management actions do not individually or cumulatively impact progress toward indicator attainment.

I.1.1. Watershed Categories

Within the planning area, approximately 1,178 sixth level Hydrologic Unit Code (HUC) Watersheds exist. Of these, approximately 520 contain BLM land. The watersheds were categorized into two primary categories; Conservation and Restoration. Approximately 158 watersheds contained only minor amounts of BLM land or no fisheries habitat, therefore these watersheds were excluded from consideration as conservation or restoration watersheds. The remaining 366 watersheds were categorized based on the following:

Conservation Watersheds

These watersheds have processes and functions that occur in a relatively undisturbed and natural landscape setting. Hydrologic function, such as sediment amounts and stream flow regimes resulting from disturbance, are within a natural range of frequency, duration, and intensity. Waters are meeting designated or existing beneficial uses. Land uses and human activities do not strongly influence aquatic and hydrologic functions, as indicated by low road density and few stream crossings. Based on these criteria, 347 watersheds were placed in this category.

Management strategies will emphasize natural disturbance regimes, recognizing that active management may be required to conserve physical and biological processes and patterns. For example, road and trail maintenance to minimize erosion and the resulting sediment additions to nearby streams and waterbodies is essential within conservation watersheds.

Restoration Watersheds

These watersheds are those where biological and physical processes and functions do not reflect natural conditions because of past and long-term human caused land disturbances. The common effects of these disturbances are a long-term (decades) increase of sediment deposition in streams, loss of large woody debris recruitment to stream channels, and abnormal hydrologic patterns (water flows). Additive impacts from human disturbances and periodic natural events, such as large wildland fires, landslides, and floods, exacerbate abnormal watershed and biological conditions. Based on these criteria, 19 watersheds were placed in this category.

Active management will generally be required to restore the physical and biological function to their natural range of frequency, duration, and intensity. Identifying and assessing the impacts on habitat will allow managers to focus restoration efforts in the most effective manner to achieve hydrologic and biological recovery.

I.1.2. Priority Ranking Factors For Conservation And Restoration Watersheds

To identify the highest resource value aquatic habitats for conservation and restoration a priority ranking system was developed. Priority ranking for each conservation or restoration watershed was based on a variety of factors. Primary issues considered in ranking status were priority fish species presence (diversity), resource uses (subsistence and recreation), habitat conditions, and productivity. These ranking criteria and associated point system are outlined below.

Value	Definition	Score
Endangered Species Act Aquatic Resources	Federally listed aquatic species are present.	3 Points
Subsistence Fisheries Use Areas	Using the best available information, determine if areas within the watershed include fish subsistence harvest areas.	2 Points
BLM Aquatic Special Status Species (BLM SSS)	Using the best available information, determine if Aquatic (riparian obligate) BLM species of management concern, BLM Alaska sensitive species, or BLM Alaska watch species occur in the watershed.	2 Points
Essential Fish Habitat (EFH) Present or Directly Affected	Using the ADF&G Anadromous Catalog, GIS data, and/or professional knowledge, determine if anadromous species occur in the watershed.	2 Points* *1 point if stream mouth in close proximity to EFH
Fish Species Diversity	Based on reports and/or professional knowledge, determine the number of fish species occurring in the watershed.	1 Species = 1 Point 2-4 Species = 2 Points >5 Species = 3 Points
Watershed Productivity	Fish population or the level of spawning activity is comparatively low or high based on stream size.	1(low)-3(high) Points
Anadromous Species Present	Using the ADF&G Anadromous Catalog GIS data and/or professional knowledge, determine if anadromous species occur in the watershed.	1 Point
Important Recreational Fisheries	Using the best available information, determine if areas within the watershed include important recreational fisheries.	1 Point

Value	Definition	Score
Intact/Reference Watershed	Is the watershed unaffected by historic or current land use practices?	1 Point
High Value Habitat Type (spawning/overwintering)	Based on reports and/or professional knowledge, determine if high-value habitats occur in the watershed.	1 Point

Following the evaluation of the 363 sixth level HUC watersheds, the numeric scores were totaled. The highest scoring watersheds were reviewed by fisheries staff and recommended for consideration as either Riparian Conservation Areas or High Priority Restoration Watersheds.

Riparian Conservation Areas

Riparian Conservation Areas or RCAs are specific conservation watersheds that contain the highest fisheries and riparian resource values within the planning area. In these watersheds, riparian-dependent resources receive primary emphasis and management activities are subject to specific required operating procedures (Appendix A). These areas are designed to be managed using a variety of techniques which may be essential to achieving or maintaining desired riparian and aquatic conditions.

Based on the themes of the alternatives and analysis of the dataset, watershed scores were identified that would dictate the number of proposed RCAs in each alternative. Alternative B and E would have the highest number of RCAs, including all conservation watersheds scoring five or more total points. Alternative C would have a moderate number of RCAs, including all watersheds scoring eight or more total points. Alternative D would have the least number of RCAs, including only those watersheds that scored 11 or more total points. Conservation Watersheds scoring five or more points are listed in the table below and displayed on Maps 6, 8, and 11.

HUC No.	Name of 12th level HUC	Ranking Factors										Sum
		Anadromous	BLM SSS	Subsistence	Recreation	Intact	Wtrshd Product	EFH	ESA	High Value	Diversity	
FORTYMILE SUBUNIT												
190401040306	Buck Creek-North Fork Fortymile River	0	0	0	1	1	1	0	0	0	3	6
190401040308	North Fork Fortymile River	0	0	0	1	1	1	0	0	0	3	6
190401040701	Middle Fork North Fork Fortymile River	0	0	0	1	1	1	0	0	0	3	6
190401040803	The Kink-North Fork Fortymile River	0	0	0	1	1	1	0	0	0	3	6
190401040806	Hilda Creek-North Fork Fortymile River	0	0	0	1	1	1	0	0	0	3	6
190401041305	Moose Creek-Mosquito Fork	0	0	0	1	1	2	0	0	0	2	6
190401041308	Outlet Mosquito Fork	0	0	0	1	1	1	0	0	0	3	6
190401042006	South Fork Fortymile River	0	0	0	1	1	1	0	0	0	2	5
190401042201	Fortymile River	0	0	0	1	1	2	0	0	0	3	7
190404010105	Seward Creek-Mission Creek	1	0	0	0	1	0	2	0	1	2	7
190405030602	Tower Bluffs Rapids	1	0	0	0	1	3	2	0	1	3	11
STEESE SUBUNIT												
190404020207	Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190404020212	Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190404020401	McLean Creek-Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190404020403	Thomas Creek-Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190404020407	Sheep Creek	1	0	0	0	1	0	2	0	1	2	7
190404020408	Pitkas Bar	1	0	0	1	1	3	2	0	1	3	12
190404020506	Puzzle Gulch	1	0	0	0	1	0	1	0	0	2	5
190404020601	Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190404020606	Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190404020903	George Creek-Birch Creek	1	0	0	1	1	3	2	0	1	3	12
190404021005	Preacher Creek	1	0	0	0	1	2	2	0	1	3	10
190404021009	Ninetyeight Pup-Preacher Creek	1	0	0	0	1	2	2	0	1	3	10
190404021102	Headwaters North Fork Preacher Creek	1	0	0	0	1	1	2	0	1	2	8
190404021103	Upper North Fork Preacher Creek	1	0	0	0	1	1	2	0	1	2	8
190404021104	Middle North Fork Preacher Creek	1	0	0	0	1	2	2	0	1	3	10

HUC No.	Name of 12th level HUC	Ranking Factors										Sum
		Anadromous	BLM SSS	Subsistence	Recreation	Intact	Wtrshd Product	EFH	ESA	High Value	Diversity	
190404021105	Lower North Fork Preacher Creek	1	0	0	0	1	2	2	0	1	3	10
190404021201	Loper Creek	0	0	0	0	1	2	1	0	0	2	6
190404021202	Middle Preacher Creek	1	0	0	0	1	2	2	0	1	3	10
STEESE AND UPPER BLACK RIVER SUBUNITS												
190404011903	Yukon River	1	0	2	0	1	0	2	0	1	3	10
190404011904	Yukon River	1	0	1	0	1	0	2	0	1	3	9
190404011906	Fourteenmile Creek-Yukon River	1	0	2	0	1	0	2	0	1	3	10
UPPER BLACK RIVER SUBUNIT												
190402040404	Bear Mountain Creek	0	0	0	0	1	1	0	0	0	3	5
190402040502	Grayling Fork Black River	0	0	0	0	1	1	0	0	0	3	5
190402040504	Grayling Fork Black River	0	0	0	0	1	1	0	0	0	3	5
190402040701	Grayling Fork Black River	0	0	0	0	1	1	0	0	0	3	5
190402040702	unnamed Tributary-Upper Black River	0	0	0	0	1	1	0	0	0	3	5
190402040703	unnamed Tributary-Upper Black River	0	0	0	0	1	1	0	0	0	3	5
190402040704	unnamed Tributary-Upper Black River	0	0	0	0	1	1	0	0	0	3	5
190402040705	Grayling Fork Black River	0	0	0	0	1	1	0	0	0	3	5
190402040802	Black River	0	0	0	0	1	2	0	0	0	3	6
190402040804	Big Duck Lake-Black River	0	0	0	0	1	1	0	0	0	3	5
190402041005	Outlet Runt Creek	1	0	2	0	1	0	1	0	0	2	7
190402041105	Salmon Fork Black	1	0	0	0	1	3	2	0	1	3	11
190402041107	Salmon Fork Black	1	0	2	0	1	3	2	0	1	3	13
190402041207	Tetthajik Creek	1	0	0	0	1	2	2	0	0	2	8
190402041309	Lower Kevinjik Creek	1	0	0	0	1	1	2	0	1	2	8
190402041403	Salmon Fork Black River	1	0	2	0	1	3	2	0	1	3	13
190402060105	Headwaters Little Black River	0	0	0	0	1	1	0	0	0	3	5
190402060106	Little Black River	0	0	0	0	1	1	0	0	0	3	5
190402060109	Little Black River	0	0	0	0	1	1	0	0	0	3	5
190402060404	Little Black River	0	0	0	0	1	1	0	0	0	3	5
190404010901	unnamed Tributary-Kandik	1	0	0	0	1	1	2	0	1	2	8
190404010902	Headwaters Kandik River	1	0	0	0	1	3	2	0	1	3	11
190404010903	Big Sitdown Creek	1	0	0	0	1	1	2	0	1	2	8

HUC No.	Name of 12th level HUC	Ranking Factors										Sum
		Anadro-mous	BLM SSS	Subsis-tence	Recre-ation	In-tact	Wtrshd Product	EFH	ESA	High Value	Diver-sity	
190404010906	Indian Grave Creek	1	0	0	0	1	1	2	0	1	2	8
190404010908	Kandik River	1	0	0	0	1	3	2	0	1	3	11
WHITE MOUNTAINS SUBUNIT												
190404021803	Bear Creek	0	0	0	0	1	1	1	0	0	2	5
190404022003	Ophir Creek	1	0	0	0	1	1	2	0	1	2	8
190404022104	Beaver Creek	1	2	0	1	1	3	2	0	1	3	14
190404022109	Beaver Creek	1	2	0	1	1	3	2	0	1	3	14
190404022202	South Beaver Creek	1	2	0	1	1	3	2	0	1	3	14
190404022206	Montana Creek-South Beaver Creek	1	2	0	1	1	3	2	0	1	3	14
190404022207	South Beaver Creek	1	2	0	1	1	3	2	0	1	3	14
190404022208	Beaver Creek	1	2	0	1	1	3	2	0	1	3	14
190404022301	Headwaters Victoria Creek	1	0	0	0	1	2	2	0	1	3	10
190404022303	Victoria Creek	1	0	0	0	1	2	2	0	1	3	10
190404022304	Deadwood Creek-Victoria Creek	1	0	0	0	1	2	2	0	1	3	10
190404022305	Outlet Victoria Creek	1	0	0	0	1	2	2	0	1	3	10
190404022406	Victoria Mountain-Beaver Creek	1	2	0	1	1	3	2	0	1	3	14
190404022408	Yellow Creek-Beaver Creek	1	2	0	1	1	3	2	0	1	3	14

High Priority Restoration Watersheds

To determine the High Priority Restoration Watersheds, the same process utilized for identification of RCAs was employed. Based on the limited number of restoration watersheds and the resource values, it was determined that watersheds scoring greater than five points would be considered High Priority Restoration Watersheds across all alternatives. These watersheds are priority areas for active restoration practices. In these areas, management activities will be designed to accelerate the development of self-sustaining, ecologically healthy riparian and aquatic ecosystems. Restoration watersheds scoring five or more points are listed in the table below and displayed on Maps 6–10.

Huc No.	12th Level HUC Name	Ranking Factors										Score
		Anadromous	BLM SSS	Subsistence	Recreation	Intact	Wtrshd Product	EFH	ESA	High Value	Diversity	
FORTYMILE SUBUNIT												
190401042207	Sam Patch Creek-Fortymile River	0	0	0	1	0	1	0	0	0	3	5
190401042203	Steele Creek-Fortymile River	0	0	0	1	0	1	0	0	0	3	5
STEESE SUBUNIT												
190404020206	North Fork Birch Creek	1	0	0	1	0	0	2	0	0	3	6
190404020406	Harrison Creek	1	0	0	0	0	0	2	0	0	3	5
190404020205	Twelve-mile Creek	1	0	0		0	0	2	0	0	3	6
190404020306	Volcano Creek-Clums Fork	0	0	0	0	0	1	1	0	0	3	5
WHITE MOUNTAINS SUBUNIT												
190404022004	Sumner Creek-Nome Creek	1	0	0	1	0	2	2	0	1	2	9

Remaining Restoration Watersheds

Using the same ranking process, the remaining restoration watersheds scored less than five points. Restoration watersheds scoring less than five points are listed in the table below.

Huc No.	12th Level HUC Name	Ranking Factors										Score
		Anadromous	BLM SSS	Subsistence	Recreation	Intact	Wtrshd Product	EFH	ESA	High Value	Diversity	
FORTYMILE SUBUNIT												
190401042206	Smith Creek	0	0	0	0	0	1	0	0	0	2	3
190401042202	Polly Creek	0	0	0	0	0	1	0	0	0	2	3
190401042107	O'Brien Creek	0	0	0	0	0	1	0	0	0	2	3
190401042003	Fortyfive Pup	0	0	0	0	0	0	0	0	0	2	2
190401042005	Uhler Creek	0	0	0	0	0	1	0	0	0	2	3
190401041908	Wade Creek	0	0	0	0	0	1	0	0	0	2	3
190401041308	Outlet Mosquito Fork	0	0	0	1	0	1	0	0	0	2	4
STEESE SUBUNIT												
190404020208	Fryingpan Creek	0	0	0	0	0	1	1	0	0	2	4
190404020404	South Fork Harrison Creek	0	0	0	0	0	1	0	0	0	2	3
190404020405	North Fork Harrison Creek	0	0	0	0	0	1	0	0	0	2	3
190404021003	Bachelor Creek	0	0	0	0	0	1	0	0	0	2	3
190404020302	Lawson Creek	0	0	0	0	0	0	0	0	0	2	2

I.2. Monitoring and Adaptive Management

I.2.1. Monitoring and Evaluation of the RMP

BLM planning regulations require the monitoring and evaluation of Resource Management Plans (RMPs) at appropriate intervals. After approval of the RMP and signing of the Record of Decision, an implementation schedule will be completed and will incorporate monitoring plans. Monitoring data will be used to assess resource conditions, identify resource issues and conflicts, determine if resource objectives are met, determine trends for achievement of desired conditions, and periodically refine and update desired conditions and management strategy.

Monitoring is an essential component of natural resource management because it provides information on the relative success of management strategies. The implementation of the RMP will be monitored to ensure that management actions follow prescribed management direction (implementation monitoring), meet desired objectives (effectiveness monitoring) and are based on accurate assumptions (validation monitoring).

Monitoring will be coordinated with other appropriate agencies and organizations to enhance the efficiency and usefulness of the results across a variety of administrative units. The approach will build on past and present monitoring work. In addition, specific monitoring protocols, criteria, goals, and reporting formats will be developed.

I.2.2. Adaptive Management

Adaptive management requires knowledge of the current conditions; potential or capability of riparian sites and streams; current management and effects of the management on the resources; and management changes that may be made to move the current condition toward the desired condition. Single indicators of conditions or trend are usually not adequate to make informed decisions. Information on the condition and trend of the vegetation, stream banks, aquatic resources, and knowledge of current management practices can help establish “cause-and-effect” relationships that are important to make appropriate decisions. Such information allows refinement and development of more realistic, locally-derived project or activity design, standards, or criteria.

Monitoring is an integral component of many management approaches, such as adaptive management and ecosystem management. Adaptive management is based on monitoring that is sufficiently sensitive to detect relevant ecological changes. In addition, the success of adaptive management depends on the accuracy and credibility of information obtained through inventories and monitoring. Close coordination and interaction between monitoring and research are important for the adaptive management process to succeed. Data obtained through systematic and statistically valid monitoring can be used by scientists to develop research hypotheses related to priority issues. Conversely, the results obtained through research can be used to further refine the protocols and strategies used to monitor and evaluate the effectiveness of RMP implementation.

Monitoring results will provide managers with the information to determine whether an objective has been met, and whether to continue or modify the management direction. Findings obtained through monitoring, together with research and other new information will provide a basis for adaptive management changes to the plan. The monitoring process and adaptive management share the goal of improving effectiveness and permitting response to increased knowledge and a changing landscape. The monitoring program will not remain static. The monitoring plan will be periodically evaluated to ascertain that the monitoring questions and standards are still relevant, and will be adjusted as appropriate. Some monitoring items may be discontinued and others may be added as knowledge and issues change.

I.2.3. Implementation and Effectiveness Monitoring

The basics of RMP level monitoring will (1) determine if the plan, project, or activities are implemented correctly and are achieving desired results, (2) provide a mechanism for accountability and oversight, (3) evaluate the effectiveness of recovery and restoration efforts, and (4) provide a feedback loop (adaptive management) so that management direction may be evaluated and modified. Management considerations for monitoring include the following:

- Focus monitoring on key questions that inform decision-making and allow adjustments to management.
- Monitoring emphasis and intensity should be commensurate with the importance of the question asked. For example, if adaptive decision-making is used, it will be important to monitor the key parameters to the degree necessary to support the current course of action or to trigger an alternate approach.
- Plan level monitoring should make use of, and not duplicate, broad-scale monitoring programs. To the extent practicable, monitoring done at the plan scale should be compatible with, and complementary to, broader and finer scale monitoring.
- Monitoring should be coordinated with, and where possible consolidated with, similar efforts of other agencies.
- Outcome-based management approaches rely on monitoring for their success. These approaches typically require a different level and type of monitoring than prescriptive approaches.
- Monitoring commitments in plans should be feasible and achievable.

Monitoring is a process of gathering information through observation and measurement to ensure that project design criteria and mitigation are implemented and to determine if goals and objectives are achieved. The two types of monitoring identified are implementation and effectiveness. Specifics of these types of monitoring are:

- Implementation monitoring is used to determine if management practices are implemented as identified in an activity plan, environmental assessment, environmental impact statement, Biological Assessment, or Biological Opinion.
- Effectiveness monitoring is used to determine if management practices, as designed and executed, are effective in meeting project goals and objectives as defined in an activity plan, environmental assessment, EIS. Biological Assessment, or Biological Opinion.

The results of monitoring will be summarized and shared, as requested, with state and federal agencies, Native groups, and other members of the public.

The design criteria and mitigation would be monitored on a specific action or sub-sample of activity or project. Agency representatives overseeing the actions would do the monitoring, as well as an interdisciplinary or multiparty team, through a combination of any of the following methods:

- Review environmental assessment, Biological Assessment, and Biological Opinion identified project specifications and terms and conditions to ensure that monitoring is provided for in contract or plans of operation (project design and mitigation criteria).

- Review project designs and plans of operation; review contract administration reports (daily diaries).
- Review activities on the ground before, during, and after implementation.

Where appropriate, photograph conditions before the project begins, during implementation, and after completion.

The Eastern Interior Field Office implementation and effectiveness monitoring strategy will include the use of databases and reporting mechanisms. Monitoring protocols will be in accord with appropriate BLM Technical Bulletins or other acceptable monitoring methods which would address the Desired Conditions and Habitat Metrics included in the Matrix of Pathways. Acceptable monitoring methods would be adaptive and include protocols that have been generally approved and accepted by state, federal, and other groups to document existing desired conditions.

I.3. Watershed Conditions Matrix and Effects Checklist

I.3.1. Watershed Condition Matrix

This watershed assessment matrix is adapted from the National Marine Fisheries Service (NMFS 1996) and is linked to the desired future condition for aquatic habitats. This matrix should be used during watershed assessments to determine existing watershed Condition Ratings. The three Condition Rating classes are 1) High, 2) Moderate, and 3) Low. The order of the pathways begins with the overall watershed scale indicators at the top and then focuses down through the channel conditions, and finally specific habitat elements.

The purpose of the watershed assessment matrix is to provide a rating for baseline conditions, these may be modified with new information or science which is applicable to conditions occurring in the planning area. This matrix may be updated, modified, or replaced with another watershed assessment tool if new science or new area/watershed resource data indicates changes are needed. For example, the BLM Assessment, Inventory, and Monitoring (AIM) program is currently developing predictive models based on data collected across BLM lands in Alaska using a probabilistic sample design. These models will allow the comparison of data from impacted stream segments or watersheds to what would be expected based on natural variability within a pristine watershed. This information will significantly improve the watershed assessment matrix, which depicts he range of desired conditions in a watershed and is shown in Table I.1, “Watershed Assessment Matrix”.

Table I.1. Watershed Assessment Matrix

Pathway	Metric		High Condition	Moderate Condition	Low Condition
Watershed	Watershed Road/Track Density		<1 mile per square mile	1-3 mile per square mile	>3 miles per square mile
	Streamside Road/Track Density		<1 mile per square mile	1-2 mile per square mile	>2 mile per square mile
	Riparian Vegetation Condition		Percent of riparian vegetation in the greenline dominated by late seral community types or anchored rocks/logs is >80% . The riparian vegetation provides adequate shade, large wood debris recruitment, and connectivity.	Percent of riparian vegetation in the greenline dominated by late seral community types or anchored rocks/logs is 50-79%. The riparian vegetation provides adequate shade, large wood debris recruitment, and connectivity.	Percent of riparian vegetation in the greenline dominated by late seral community types or anchored rocks/logs is <50%. The riparian vegetation provides adequate shade, large wood debris recruitment, and connectivity.
Habitat Elements	Spawning Gravel		Surficial fine sediment (< 0.06 mm) is <5%.	Surficial fine sediment (< 0.06 mm) is 5–10%.	Surficial fine sediment (< 0.06 mm) is >10%.
	Large Woody Debris (LWD)		Near-natural levels of acting and potential large wood debris	Acting levels of large wood debris are near-natural, potential levels are below near-natural, or vice versa.	Both acting and potential levels of large wood debris are below near-natural levels.
	Pool Frequency		Meets pool frequency occurrence	Meets pool frequency standards but large woody debris recruitment or other pool-creating factors are inadequate to maintain pools over time.	Does not meet pool frequency standards.
	Channel Width (ft)	# pools/mile			
	<=5	184			
	>5<=10	96			
	>10<=15	70			
	<15>=20	56			
	<20>=25	47			
	<25>=50	26			
	<50>=75	23			
	>75	18			
	Pool Quality (based on 2008 BLM MIM [a] methodology or equivalent)		Pool quality rating >80	Pool quality rating 60-80	Pool quality rating <60
	Refugium		Adequate habitat refugia exist within watershed (number, size, condition, species requirements, and connectivity).	Limited habitat refugia exist within watershed (number, size, condition, species requirements, and connectivity).	Inadequate habitat refugia exist within watershed (number, size, condition, species requirements, and connectivity).
	Percent Surface Fines (< 6 mm)		A and B Rosgen Channel Types (RCTs) <=10% C and E RCTs <= 20%	A and B RCTs = 11-20% C and E CT's = 21-30%	A and B RCTs > = 21% C and E RCTs > = 31%

Pathway	Metric	High Condition	Moderate Condition	Low Condition
Channel Condition and Dynamics	Width to Depth (W/D) Ratio	A RCTs <10 B RCTs <20 C RCTs <40 E RCTs <7 F RCTs <35 G RCTs <9	A RCTs <10-12 B RCTs <20-35 C RCTs <40-60 E RCTs <7-9 F RCTs <35-70 G RCTs <9-11	A RCTs >12 B RCTs >35 C RCTs >60 E RCTs >9 F RCTs >70 G RCTs >11
	Streambank Stability	A and B RCTs >95% C RCTs >90% E RCTs = 100%	A and B RCTs 90-95% C RCTs 80-90% E RCTs 95-100%	A and B RCTs <90% C RCTs <80% E RCTs <95%
	Floodplain Connectivity	Off-channel areas are seasonally hydrologically linked to main channel; overbank flows occur in the frequency and magnitude expected for the valley bottom or channel type setting.	Reduced linkage of wetland, floodplains and riparian areas to main channel; overbank flows are reduced or increased relative to historic frequency, as evidenced by moderated aggradation or degradation.	Severe reduction of increase in overbank flows occur relative to the frequency and magnitude expected for the valley bottom or channel type setting; wetland area drastically reduced and riparian vegetation/succession altered significantly.
Water Quality	State Standards (Turbidity, Temperature, etc.,)			
Habitat Access	Physical barriers – adults	Any human-made barriers present in watershed allow full upstream and downstream fish passage at all flow (no barrier).	Any human-made barriers present in watershed are a partial barrier to upstream or downstream fish passage.	Any human-made barriers present in watershed are a full barrier to upstream or downstream fish passage at all flows.
	Physical barriers- juveniles	Any human-made barriers present in watershed allow full upstream and downstream fish passage at all flow (no barrier).	Any human-made barriers present in watershed are a partial barrier to upstream or downstream fish passage.	Any human-made barriers present in watershed are a full barrier to upstream or downstream fish passage at all flows.

[a] Multiple Indicator Monitoring

I.3.2. Environmental Baseline and Effects Checklist

In concert with the results of the baseline habitat assessment for a given watershed, the following checklist (Table I.2, “Checklist for Documenting Environmental Baseline and Effects of Action(s) on Relevant Indicators”) should be used to determine the effects of site-specific actions on aquatic habitats. These indicators are a suite of metrics that collectively influence aquatic habitat quality and the health of cold-water fish populations. These indicators should not be used individually to determine if a given action should or should not be authorized. This checklist is a decision support tool to aid biologists with impact analysis and the associated identification of appropriate mitigation measures. For some metrics data may not be available, for other metrics extensive information may exist. A summary rationale associated with each indicator baseline rating and the effect determination should be attached to the completed checklist.

The Environmental baseline consists of ratings of High, Moderate, or Low condition.

For the purposes of this checklist, the following definitions apply:

- “Restore” means to change the function of the indicator for the better, or that the restoration rate is increased.
- “Maintain” means that the function of an indicator will not be degraded and the natural rate of restoration for this indicator will not be impaired.
- “Degrade” means to change the function of the indicator for the worse, or that the natural rate of restoration will be impaired.

Table I.2. Checklist for Documenting Environmental Baseline and Effects of Action(s) on Relevant Indicators

Pathways	Environmental Baseline			Effects of the Action(s)		
Indicator	High Condition	Moderate Condition	Low Condition	Restore	Maintain	Degrade
Watershed Conditions						
Watershed Road/Track Density						
Streamside Road/Track Density						
Riparian Vegetation Condition						
Channel Conditions						
Width to Depth (W/D) Ratio						
Stream bank Stability						
Floodplain Connectivity						
Water Quality						
Temperature						
Turbidity						
Habitat Access						
Physical barriers – adults						
Physical barriers- juveniles						
Habitat Elements						
Cobble Embeddedness						
Large Woody Debris (LWD)						
Pool Frequency						
Pool Quality						
Refugium						
Percent Surface Fines						

I.4. Future Watershed Adjustments

Future identification of aquatic species as Special Status (e.g., federally listed under the Endangered Species Act, BLM Sensitive) in the planning area would result in an evaluation of specific watersheds utilized by the species or considered necessary for recovery to determine if additional RCAs are appropriate. Currently, no watersheds within the planning area are considered to be necessary for the recovery of special status aquatic species. Therefore no RCAs were identified based on the presence of Special Status Aquatic Species.

The intent of this approach to adding future RCAs is to provide high quality habitat for rare species and support expansion and recolonization of these species to adjacent watersheds. These areas should conserve key processes likely to influence the persistence of populations or metapopulations. Additions to, deletions from, or modifications of, Special Status Aquatic Species RCA watersheds would be based on new information, revisions to the BLM Alaska Sensitive Species List, or as species are listed under the Endangered Species Act. In general, these additions would be accomplished through the development of activity plans, such as Fisheries Habitat Management Plans, which would outline management goals and objectives. As with other RCAs, management activities would emphasize achieving or maintaining the riparian and aquatic values, including key processes, for which they are managed.

I.5. Watershed Assessment Process

The purpose of a watershed assessment is to develop and document an understanding of the ecological structures, functions, processes, and interactions occurring at the watershed scale (5th-6th HUC unit). This process is designed to describe past and current conditions, and develop restoration or management recommendations. The ultimate goal is to provide guidance for management actions that would sustain or improve the health and productivity of natural resources.

Objectives of Watershed Analysis

1. Evaluate cumulative watershed effects – watershed analysis enhances the ability to estimate direct, indirect, and cumulative effects of management activities.
2. Define watershed restoration needs, goals and objectives (if needed) – provide guidance on the general type, location, and sequence of appropriate activities within a watershed.
3. Monitor the effectiveness of watershed protection measures – process for adaptive management feedback loop.
4. Provide sufficient watershed context for understanding and carrying out land use activities with a geomorphic context – important tool used in meeting ecosystem management objectives.

Appropriate Methodology

The Federal Guide for Watershed Analysis—Ecosystem Analysis at the Watershed Scale Version 2.3 (Forest Service 1996) was used as a general guide to develop a framework for conducting watershed assessments; however, other processes can be utilized or developed to satisfy the objectives outlined above. For example, a more rapid watershed assessment process emphasizing remote sensing data analysis coupled with stream survey data (e.g., riparian condition, stream habitat, water quality, fish species diversity) may optimize assessment efficiency and identify areas requiring more field intensive inventories.

The following six-step process is not issue-driven but focuses on analysis topics, along with specific watershed problems and concerns. This analysis is not a decision making process but will help identify opportunities for future management actions, including planning, project development, and regulatory compliance. Below is a summary the six steps taken to develop an ecosystem analysis at the watershed scale.

Step 1 Characterization of the Watershed: Identify the dominant physical, biological, and human processes or features of the watershed that affect ecosystem functions or conditions, including the relationship between these ecosystem elements and those occurring in the river basin and/or watersheds. When characterizing the watershed, team members identify the most important land allocations, plan objectives, and regulatory constraints that influence resource management in the watershed.

Step 2 Identification of Issues and Key Questions: Focus the analysis on the key elements of the ecosystem that are most relevant to the management questions and objectives, human values, or resource conditions within the area.

Step 3 Description of Current Conditions: Develop more detailed information relevant to the issues and key questions identified in Step 2. Step 3 is where the current range, distribution, and condition of the relevant ecosystem elements are documented.

Step 4 Description of Reference Conditions: Explain how ecological conditions have changed over time as a result of human influence and natural disturbances. A reference is developed for later comparison with current conditions over the period that the system evolved and with key management plan objectives.

Step 5 Synthesis and Interpretation of Information: Compare existing and reference conditions of specific ecosystem elements and to explain significant differences, similarities, or trends and their causes. The capability of the system to achieve key management plan objectives is also evaluated.

Step 6 Recommendations: Identify management recommendations that address resource problems noted in this analysis and then to change the current watershed conditions toward the desired future condition for this area. Recommendations, monitoring needs, and data gaps are identified and described. These are recommendations based on the data currently available. This is an ongoing process and alternative or additional recommendations may be made in the future.

I.6. Recommended Conservation Measures for Essential Fish Habitat

The following are recommended conservation measures for Essential Fish Habitat (EFH). These are based on *The Final Environmental Impact Statement for Essential Fish Habitat Identification and Conservation in Alaska, Appendix G - Non-fishing Impacts to Essential Fish Habitat and Recommended Conservation Measures* (NMFS 2005).

Roads and Road Maintenance

The following conservation measures for road building and maintenance should be viewed as options to avoid and minimize adverse impacts and promote the conservation, enhancement, and proper functioning of EFH.

1. To the extent practicable, avoid locating roads near fish-bearing streams. Roads should be sited to avoid sensitive areas such as streams, wetlands, and steep slopes.
2. Incorporate appropriate erosion control and stabilization measures into road construction plans to reduce erosion potential.
3. Build bridges when possible. If culverts are used, they should be sized, constructed, and maintained to match the gradient and width of the stream, to accommodate design flood flows, and they should be large enough to provide for migratory passage of adult and juvenile fishes. If appropriate, consider using the culvert guidelines contained in the Alaska Department of Fish and Game and the Alaska Department of Transportation and Public Facilities Fish Pass Memorandum of Agreement, August 2001 online at http://www.sf.adg.state.ak.us/SARR/fishpassage/pdfs/dot_adfg_fishpass080301.pdf.
4. Locate stream crossings in stable stream reaches.
5. Design bridge abutments to minimize disturbances to stream banks and place abutments outside of the floodplain whenever possible.
6. To the extent practicable, avoid road construction across alluvial floodplains, mass wastage areas, or braided stream bottom lands unless site-specific protection can be implemented to ensure protection of soils, water, and associated resources.
7. Avoid side-casting of road construction and maintenance materials on native surfaces and into streams.
8. To the extent practicable, use native vegetation in stabilization

Mineral Mining

The following measures are adapted from recommendations in Spence et al. (1996), NMFS (2004), and Washington Department of Fish and Wildlife (1998). They should be viewed as options to avoid and minimize impacts and promote the conservation, enhancement, and proper functioning of EFH.

1. To the extent practicable, avoid mineral mining in waters, riparian areas, and floodplains containing EFH.
2. Schedule necessary in-water activities when the fewest species and least vulnerable life stages of federally managed species will be present.
3. Use an integrated environmental assessment, management, and monitoring package in accordance with state and federal law and regulations. Allow for adaptive operations to minimize adverse effects on EFH.
4. Minimize spillage of dirt, fuel, oil, toxic materials, and other contaminants into EFH. Prepare a spill prevention plan if appropriate.
5. Treat wastewater (acid neutralization, sulfide precipitation, reverse osmosis, electrochemical, or biological treatments) and recycle on site to minimize discharge to streams. Test wastewater before discharge for compliance with federal and state clean water standards.
6. Minimize opportunities for sediments to enter or affect EFH. Use methods such as contouring, mulching, and construction of settling ponds to control sediment transport. Monitor turbidity during operations, and cease operations if turbidity exceeds predetermined threshold levels. Use methods such as turbidity/sediment curtains to limit the spread of suspended sediments and minimize the area affected.
7. If possible, reclaim rather than bury, mine wastes that contains heavy metals, acid materials, or other toxic compounds, if leachate can enter EFH through groundwater.
8. Restore natural contours and plant native vegetation on-site after use to restore habitat function to the extent practicable. Monitor the site for an appropriate time to evaluate performance and implement corrective measures if necessary.

9. Minimize the aerial extent of ground disturbance (e.g., through phasing of operations), and stabilize disturbed lands to reduce erosion.

Sand and Gravel Mining

Individual gravel extraction operations should be judged in the context of their spatial, temporal, and cumulative impacts. Potential impacts to habitat should be viewed from a watershed management perspective. The following recommended conservation measures for sand and gravel mining are adapted from NMFS (2004) and Oregon Water Resource Research Institute (1995). They should be viewed as options to avoid and minimize impacts and promote the conservation, enhancement, and proper functioning of EFH.

1. To the extent practicable, avoid sand and gravel mining in waters containing EFH. Many factors influence site selection for a gravel or sand mining site. Because of the need to incorporate technical, economic, and environmental factors, siting decisions should be considered on a case-by-case basis (U.S. Fish and Wildlife Service 1980).
2. Identify upland or off-channel (where the channel will not be captured) gravel extraction sites as alternatives to gravel mining in or adjacent to EFH, if possible.
3. Design, manage, and monitor sand and gravel mining operations to minimize potential direct and indirect impacts to EFH, if operations in EFH cannot be avoided. This includes, but is not limited to, migratory corridors, foraging and spawning areas, stream/river banks, and intertidal areas.
4. Minimize the areal extent and depth of extraction.
5. Include restoration, mitigation, and monitoring plans, as appropriate in sand/gravel extraction plans.

Oil/Gas Exploration/Development/Production

As part of pre-project planning, identify all species of concern regulated under federal or state fishery management plans that inhabit, spawn, or migrate through areas slated for exploration, development, or production. Pay particular attention to critical life stages, and develop options that avoid and minimize adverse effects from any associated activities. Modify the project design, timing, or location and use adaptive management.

1. Avoid the discharge of produced waters into marine waters and estuaries. Reinject produced waters into the oil formation whenever possible.
2. Avoid discharge of muds and cuttings into the marine and estuarine environment. Use methods to grind and reinject such wastes down an approved injection well or use onshore disposal wherever possible. When not possible, provide for a monitoring plan to ensure that the discharge meets EPA effluent limitations and related requirements.
3. To the extent practicable, avoid the placement of fill to support construction of causeways or structures in the nearshore marine environment.
4. As required by federal and state regulatory agencies, encourage the use of geographic response strategies that identify EFH and environmentally sensitive areas. Identify appropriate cleanup methods and response equipment.
5. To the extent practicable, use methods to transport oil and gas that limit the need for handling in environmentally sensitive areas, including EFH.
6. Ensure that appropriate safeguards have been considered before drilling the first development well into the targeted hydrocarbon formations whenever critical life history stages of federally managed species are present.

7. Ensure that appropriate safeguards have been considered before drilling exploration wells into untested formations whenever critical life stages of federally managed species are present. If possible, avoid such work entirely during those time frames.
8. Oil and gas transportation and production facilities should be designed, constructed, and operated in accordance with applicable regulatory and engineering standards.
9. Evaluate impacts to EFH during the decommissioning phase of oil and gas facilities, including possible impacts during the demolition phase. Minimize such impacts to the extent practicable

Habitat Restoration/Enhancement

The following recommended conservation measures should be viewed as options to avoid and minimize adverse impacts and promote the conservation, enhancement, and proper functioning of EFH.

1. Use best management practices (BMPs) to minimize and avoid potential impacts to EFH during restoration activities. BMPs should include, but are not limited to, the following:
2. a. Use turbidity curtains, hay bales, and erosion mats to protect the water column.
    b. Plan staging areas in advance, and keep them to a minimum size.
    c. Establish buffer areas around sensitive resources; flag and avoid rare plants, archaeological sites, etc.
    d. Remove invasive plant and animal species from the proposed action area before starting work. Plant only native plant species. Identify and implement measures to ensure native vegetation or revegetation success.
    e. Establish temporary access pathways before restoration activities to minimize adverse impacts from project implementation.
3. Avoid restoration work during critical life stages for fish such as spawning, nursery, and migration. Determine these periods before project implementation to reduce or avoid any potential impacts.
4. Provide adequate training and education for volunteers and project contractors to ensure minimal impact to the restoration site. Train volunteers in the use of low-impact techniques for planting, equipment handling, and any other activities associated with the restoration.
5. Conduct monitoring before, during, and after project implementation to ensure compliance with project design and restoration criteria. If immediate post-construction monitoring reveals that unavoidable impacts to EFH have occurred, ensure that appropriate coordination with NMFS occurs to determine appropriate response measures, possibly including mitigation.
6. To the extent practicable, mitigate any unavoidable damage to EFH within a reasonable time after the impacts occur.
7. Remove and, if necessary, restore any temporary access pathways and staging areas used in the restoration effort.

Appendix J

ANILCA Section 810 Analysis

Appendix J. ANILCA Section 810 Analysis

On February 29, 2008, the BLM issued a Notice of Intent to prepare a Resource Management Plan (RMP) and an associated Environmental Impact Statement (EIS) for public lands within the planning area (Map 1). As defined by the Federal Land Policy and Management Act (FLPMA), "public lands" are those federally managed lands and interests in lands (such as federal mineral estate) that are administered by the Secretary of the Interior through the BLM. In this case, public lands also include lands selected, but not yet conveyed, to the State of Alaska and Native corporations and villages.

Current management of these lands is guided by the Steese RMP (1986a), Birch Creek River Management Plan (1983b), White Mountains RMP (1986b), Beaver Creek River Management Plan (1983c), Fortymile Management Framework Plan (BLM 1980) and Fortymile River Management Plan (BLM 1983a). Since approval of these plans, new regulations and policies have created additional considerations that affect the management of public lands and new issues and concerns have arisen. Some of the decisions in the RMPs and MFP are no longer valid or have been superseded by requirements that did not exist when those plans were prepared.

BLM lands in the Upper Black River Subunit are not covered by an existing plan. Through the completion of the Eastern Interior RMP/EIS the BLM proposes to develop a comprehensive land use plan that will guide the management of the public lands and interests administered by the Fairbanks District Office through the next 20 years.

J.1. Subsistence Evaluation Factors

Section 810(a) of the Alaska National Interest Lands Conservation Act (ANILCA) requires that an evaluation of the effects on subsistence uses and needs be completed for any federal determination to "withdraw, reserve, lease, or otherwise permit the use, occupancy or disposition of public lands." As such, an evaluation of potential impacts to subsistence under ANILCA Section 810(a) must be completed for the Eastern Interior RMP/EIS. ANILCA requires that this evaluation include findings on three specific issues: 1) The effect of use, occupancy, or disposition on subsistence uses and needs; 2) The availability of other lands for the purpose sought to be achieved; and 3) Other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes (16 USC Section 3120).

The evaluation and findings required by the ANILCA Sec. 810 are developed by planning subunit for each of the four alternatives considered in the Eastern Interior RMP/EIS.

A finding that the proposed action may significantly restrict subsistence uses imposes additional requirements. These include provisions for notices to the State of Alaska and appropriate regional councils and local committees, notice of and a hearing in the vicinity of the area involved, and the making of the following determinations, as Section 810(a)(3) requires that: 1) Such a significant restriction of subsistence uses is necessary and consistent with sound management principles for utilization of the public lands; 2) The proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of use, occupancy, or other disposition; and, 3) Reasonable steps will be taken to minimize adverse effects upon subsistence uses and resources resulting from such actions.

To determine if a significant restriction of subsistence uses and needs may result from any one of the alternatives discussed in the Resource Management Plans, including their cumulative effects, the following three factors are considered: 1) The reduction in the availability of subsistence resources caused by a decline in the population or amount of harvestable resources; 2) reductions in the availability of resources used for subsistence purposes caused by alteration of their normal location and distribution patterns; and, 3) limitations on access to subsistence resources. For the purpose of an ANILCA Section 810 evaluation and finding, evaluation of limitations on access to resources by subsistence users focuses on physical and legal barriers and does not include competition from other resource users.

A significant restriction to subsistence may occur in at least two instances: 1) When an action substantially reduces populations or their availability to subsistence users; and, 2) when an action substantially limits access by subsistence users to resources. Chapter 3: Affected Environment of this Resource Management Plan provides information on areas and resources important for subsistence use, and the degree of dependence of affected villages or communities on different subsistence populations. Chapter 4 (Environmental Consequences) provides much of the data on potential impacts and limitations by subunit under each alternative, which was used to determine whether the action would cause a significant restriction to subsistence uses. The information contained in this Resource Management Plan is the primary data used in this analysis.

A subsistence evaluation and findings under ANILCA Section 810 must also include a Cumulative Impacts analysis. The following section begins with evaluations and findings by subunit for each of the four alternatives discussed in this Resource Management Plan. The cumulative case, as discussed in Chapter 4 (Environmental Consequences) of this RMP, is evaluated. This approach helps the reader separate the subsistence restrictions that potentially would result from activities proposed under the four alternatives, from those that would potentially be caused by past, present, and future activities that could occur, or have already occurred, in the surrounding area.

When analyzing the effects of the four alternatives, particular attention is paid to those communities, primarily local communities, which potentially may be most directly impacted by the proposed actions. These communities are within or adjacent to the planning area. The geographic scope of the cumulative case is generally the planning area. For this evaluation and finding, the geographic scope is expanded to include nearby lands outside the planning area to assess any impacts to subsistence that may result from negative effects to migratory subsistence species (for example Fortymile and Porcupine caribou and adjacent Canada).

In addition to ANILCA, Environmental Justice, as defined in Executive Order 12898, also calls for an analysis of the effects of federal actions on minority populations with regard to subsistence. Specifically, Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and Tribal programs and policies. Section 4-4 of Executive Order 12898, regarding the Subsistence Consumption of Fish and Wildlife, requires federal agencies to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. The Order also requires these agencies to communicate to the public any risks associated with the consumption patterns from activities that they are proposing. To this end, the description of subsistence use as presented in Chapter 3 (Existing Environment), as well as the subsistence analyses of the alternatives located in Chapter 4 (Environmental Consequences) of this Resource Management Plan, were reviewed and found to comply with the Environmental Justice requirements of EO 12898.

J.2. ANILCA 810(a) Evaluations and Findings by Subunit

The following evaluations are based on information relating to the environmental and subsistence consequences by planning subunit (Map 1) of Alternatives A through E, and the cumulative impacts analysis as presented in Chapter 4 (Environmental Consequences) of the RMP/EIS. The Standard Operating Procedures (SOPs) and Fluid Mineral Leasing Stipulations (leasing stipulations) discussed in Appendix A of the RMP/EIS are also considered for the alternatives to which they apply. The evaluations and findings focus on potential impacts to the subsistence resources and uses and access to resources.

The action alternatives, and the leasing stipulations and SOPs accompanying them, take into consideration all comments and concerns generated during the scoping process for the plan.

J.2.1. Evaluation and Finding for Fortymile Subunit

J.2.1.1. Fortymile Alternative A

Selection of Alternative A would result in continued management of the Fortymile Subunit as specified in the 1980 Fortymile Management Framework Plan (MFP) and Fortymile River Management Plan (BLM 1983a). Valid decisions contained in the Fortymile MFP and River Management Plan would be implemented if not already completed. Direction contained in existing laws, regulation and policy would also continue to be implemented, sometimes superseding provisions in the plans. The current levels, methods and mix of multiple use management of public land in the planning area would continue, and resource values would receive attention at present levels. In general, most activities would be analyzed at the project level and few uses would be limited or excluded as long as they were consistent with state and federal laws. Alaska Native Claims Settlement Act (ANCSA) 17(d)(1) withdrawals would remain in place, prohibiting new mineral entry or mineral leasing on all BLM-managed lands. Wildland fire would be managed consistent with the Alaska Land Use Plan Amendment for Wildland Fire and Fuels Management (BLM 2004b, 2005c).

Evaluation of the Effects of Use, Occupancy, or Disposition

Under Alternative A, the primary impacts to subsistence would be associated with proposed land use. This includes existing placer mining on existing valid claims and long-term camping associated with state suction dredge operations, and continuation of the current management of Recreation and Off Highway Vehicle (OHV) use as described in the MFP. The term OHV refers to "any motorized vehicle capable of, or designated for, travel on or immediately over land, water, or other natural terrain," as defined in the National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands (BLM 2001a).

Management of resources (including water, cultural and paleontological; fish, wildlife, and vegetation; and of resource uses, including mining and lands activities) requires inventory and monitoring of conditions and populations and field site visits for compliance examinations. Activities that support data collection could displace subsistence resources from traditional harvest areas. Disturbance from the use of aircraft and OHV during management surveys would be temporary and localized and would not affect any fish, wildlife or vegetative resources at the population level. Inventory and monitoring efforts would benefit subsistence resources by providing valuable data on distribution and population parameters.

Of the four alternatives, Alternative A supports the least amount of mineral entry and leasing, as the entire area is withdrawn under ANCSA 17(d)(1). As mining is limited to existing claims, impacts of mining on subsistence resources would be minimal. Effects would be mostly localized as placer mining is concentrated along the road and river-accessible portions of the Fortymile WSR. Suction dredging would be conducted through state claims in navigable sections of the Fortymile WSR and is outside the jurisdiction of BLM management. BLM-authorized long-term camping in support of state suction dredge claims would not impact subsistence resources or uses.

Under Alternative A, the greatest impact to subsistence uses would result from continuing current management standards for OHV and recreational use in the Fortymile Subunit. Currently commercial recreational use is minimal and amounts to one or two permits for non-motorized boating. OHV use in the WSR corridor would be limited to use of vehicles 1,500 gross vehicle weight rating (GVWR) and under without a permit or approved Plan of Operations. Travel would not be restricted outside the WSR corridor on BLM lands.

Recreation and OHV use are predicted to continue to increase with population growth in the state and as OHV technology continues to advance. With few restrictions on OHV use and no established limits on visitor use, impacts to subsistence resources could increase. Cross-country access would likely increase competition for harvest of wildlife resources by all users. Relief for subsistence users from increased harvest pressure would be through the Federal Subsistence Board and Alaska Board of Game regulatory processes.

Social trail proliferation often occurs when use is not limited to designated or existing trails. Trail creation by users increases the opportunity for introduction and spread of non-native invasive plant (invasive plant) species. Invasive plant species alter vegetative communities and habitats of fish and wildlife resources important for subsistence. River and stream crossings by OHV would increase over the life of the plan and lead to multiple impacts to fish and aquatic resources as the result of stream bank erosion, sedimentation and pollutants (solvents and fuels), causing direct mortality of fish and diminished water quality. Fish habitat would be affected by these impacts as well as OHV trampling of stream side vegetation. Non-native invasive species, such as aquatic plants and invertebrates harmful to fish, could be introduced in waterways when OHV harboring them cross rivers and streams.

While fish and aquatic habitat resources are not high value within the Fortymile WSR, they would benefit from any use restriction, such as withdrawal from mineral entry, applied within the designations (Chapter 4 Impacts Specific to the Fortymile Subunit Fish and Aquatic Species).

During scoping for the plan, residents of the subunit expressed concern over the large number of hunters from outside the local area competing with local subsistence hunters for moose and caribou. Concerns centered mostly on access and careful designation of trails. Although BLM-managed lands important to harvest of subsistence resources would be open to cross-country access by OHV under this alternative, most of the harvest of moose and caribou occurs on nearby state and private lands where mitigation of the competition for these resources would be outside the scope of the RMP.

Moose harvest by local residents from regulatory year (RY) 1998-99 to 2006 -07 averaged 30.4 moose and ranged from 20 – 47 moose (Gross 2008). Local residents, for the purpose of this data set, are residents of Unit 12, Unit 20(E) and eastern Unit 20(D) (Eagle, Chicken, Boundary, Northway, Tetlin, Tok, Tanacross, Slana, and Dot Lake). This differs from the customary and traditional use determinations (C&T) for federally qualified subsistence users in that residents of Delta, Healy Lake, Circle, Central, and Mentasta Lake also qualify, but residents of Slana do not.

Harvest from the Fortymile caribou herd (FCH) by federally qualified subsistence users occurs in Unit 20(E) but also the portion of Unit 25(C) in the Steese Subunit. Harvest of FCH by local residents from both subunits from RY 2002-03 through RY 2006-07 averaged 134 animals and ranged from 114 – 184 animals (Gross 2007). Local residents for this data set are residents of Units 12, 20(E) and eastern 20(D), and Circle and Central. The C&T determination for FCH in Unit 20(E) includes local residents of Delta and Healy Lake. The C&T determination for FCH in Unit 25(C) is all rural residents, as defined by the Federal Subsistence Management Regulations for the Harvest of Wildlife on Federal Public Lands in Alaska. Table 3.49, "Harvest by Village for Fortymile Caribou" in Chapter 3 (Affected Environment) displays harvest of FCH by local communities from 2004 to 2008.

Impacts to subsistence resources and uses from other potential industries, such as mineral materials (gravel pits), and forest products (timber sales) would be expected to be minor given the anticipated levels of these activities. Effects from these uses would be similar for all alternatives and are not discussed further.

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative A would be to continue the current management of BLM-managed lands in the subunit under the 1980 Fortymile Management Framework Plan. Other federal public lands in the subunit are managed under National Park Service (Yukon-Charley Rivers National Preserve) or U.S. Fish and Wildlife Service (Tetlin NWR) planning documents. Other BLM lands in the state either already have land use planning documents in place, or are being addressed by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate the use of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative A would not significantly restrict subsistence use by communities in and adjacent to the planning area, as impacts to subsistence resources would be minimal. Under this alternative the ANCSA 17(d)(1) withdrawals would be retained, prohibiting new leasable and locatable mineral activities on BLM-managed lands. The current levels, methods, and mix of multiple uses would continue. Impacts to subsistence species would be expected to be localized and temporary and would not be expected to impact resources at the population level. No impacts to access by subsistence users would be anticipated.

J.2.1.2. Fortymile Alternative B

Alternative B emphasizes active measures to protect and enhance resource values. Production of minerals and services would be more constrained than in Alternatives C or D and in some areas, uses would be excluded to protect sensitive resources. The Fortymile Area of Critical Environmental Concern (ACEC) and Special Recreation Management Areas (SRMA) would be identified, and specific measures would be proposed to protect or enhance values within these areas. Two eligible rivers, Dome Creek (recreational) and Gold Run (wild) would be recommended as suitable for designation under the Wild and Scenic River Act. Limited areas would be proposed for off-highway vehicles (OHV) to protect habitat, soil and vegetation resources. In Alternatives B–D in this subunit, where access would be closed to OHV or other motorized transport, subject to reasonable regulations and with a free permit, federally qualified subsistence users could be permitted to use some forms of motorized vehicles for subsistence purposes, such as OHV of a certain size or personal watercraft, for subsistence. Approximately 1,012,000 acres would be closed to locatable mineral entry in order to protect or maintain resource values.

Evaluation of the Effects of Use, Occupancy, or Disposition

The analysis of effects from Alternative B concludes that impact as a result of management actions or designations within the planning area will not result in significant reductions in subsistence resources or uses. Many of the proposed actions serve to positively impact subsistence in that management would emphasize habitat and resource protection. While some development activity could occur under this alternative, areas of important habitat would be protected by special designation, and by the stipulations and SOPs as presented in Appendix A. The creation of new SRMAs, ACECs, and/or the designation of rivers as WSRs, do not limit or impose any restriction on subsistence use as defined in ANILCA Title VIII.

The Fortymile ACEC (732,000 acres, Map 60) would be created to protect Fortymile caribou calving and postcalving habitat and Dall sheep habitat. The area would remain closed to entry, location, and leasing of minerals, subject to valid existing rights, and would be generally free of summer motorized use. The rest of the Fortymile WSR Corridor, the SRMA, suitable rivers, and other withdrawn areas would also remain closed to leasable and locatable minerals. Some exploration on other lands for leasable minerals may occur over the life of the plan but is expected to be minimal because limited potential and interest exist.

OHV designations would be put into place for the entire subunit. Summer OHV use outside the Semi-Primitive Recreation Management Zones (RMZs) would be on existing trails only. Recreation in the area will largely be managed for Semi-Primitive or Backcountry values (Table 2.5, “Recreation Setting Character Matrix for the Eastern Interior Planning Area”). These prescriptions will limit impacts to subsistence resources and uses. In areas designated as Closed to motorized vehicle travel (Primitive RMZs), subject to reasonable regulations, a free permit may be issued for access via snowmobiles, motorboats and airplanes for traditional activities and for travel to and from villages and homesites (ANILCA Sec. 1110). Similarly, federally qualified subsistence users, subject to reasonable regulation and with a free permit, may be permitted to use snowmobiles, motorized boats, aircraft or other means of surface transportation traditionally employed for subsistence purposes (ANILCA Sec. 811).

Eleven watersheds in the Fortymile Subunit have been identified to be managed as Riparian Conservation Areas (RCA). RCAs are watersheds that contain the highest fisheries and riparian resource values. Emphasis is on protection of riparian-dependent resources and management of activities subject to specific SOPs, such as collection of stream-specific baseline data and expediting reclamation (Chapter 2 Fish and Aquatic Species).

Areas important to fish and wildlife subsistence resources would be largely protected because they would be within the Fortymile WSR Corridor, ACEC, RCAs and SRMA.

Evaluation of the Availability of Other Lands

Alternative B would manage BLM public lands in the Fortymile Subunit in order to optimize conservation. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the state either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State of Alaska and Native corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate the use of public lands otherwise needed for subsistence include the no action and four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative B would not significantly restrict subsistence use of or access to fish, wildlife and vegetative resources by residents in the subunit. Most impacts to subsistence resources would be beneficial, and any impacts from the limited amount of development allowed to occur under this alternative would be minimized by leasing stipulations and SOPs (Chapter 2 and Appendix A).

J.2.1.3. Fortymile Alternative C

Alternative C emphasizes a moderate level of protection, use, and enhancement of resources and services. Constraints to protect resources would be implemented, but would be less restrictive than under Alternative B. This alternative would designate a smaller ACEC and SRMA with nine Recreation Management Zones (RMZs). No rivers would be recommended as suitable for designation under the WSRA. This alternative would open approximately 70 percent of the area to leasable and locatable minerals (Maps 27 and 28). Only a portion of the ACEC and the Fortymile WSR Corridor would be closed to mineral entry.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses from the increased level of development allowed by this alternative would be similar to those for Alternative B except more acres would be available for authorized mineral exploration and development and use of OHV 1,500 pounds curb weight and under would be allowed without a permit or approved Plan of Operation.

Under Alternative C, a smaller Fortymile ACEC (547,000 acres) would be created to protect Fortymile caribou calving and postcalving habitat and Dall sheep habitat. Only portions of the area would remain closed to entry, location and leasing of minerals, subject to valid existing rights (Maps 27, 28, and 61). Most areas of concentrated calving and postcalving remain closed to mineral location and entry (Chapter 4, Impacts Specific to the Fortymile Subunit, Wildlife). The Fortymile WSR Corridor and SRMA would remain closed to fluid leasable and locatable minerals. There would be one RCA. Some exploration for leasable minerals on other BLM-managed lands may occur over the life of the plan, but is expected to be minimal. Development of locatable minerals is predicted to be small but may require new access, which could facilitate travel for hunting by all users and increase competition for subsistence resources. Relief for subsistence users from increased harvest pressure would be through the Federal Subsistence Board and Alaska Board of Game regulatory processes.

Fish and aquatic habitat resources are not high value within the WSR and ACEC, but would benefit from any use restriction applied within these designations (Chapter 4 Impacts Specific to the Fortymile Subunit Fish and Aquatic Species).

The area where summer motorized use would be allowed would be larger and include most of the ACEC and much of the Fortymile WSR Corridor. OHV would be restricted to existing trails, although off-route travel for game retrieval would be allowed. Off-route game retrieval could increase participation by hunters over Alternative B but participation would be similar to that for the No Action Alternative. The Semi-Primitive RMZs would be the Middle Fork (including the North Fork and Champion Creek) and most of the Mosquito Fork and would remain closed to summer OHV use.

The increase in impacts to subsistence resources from this alternative would be small, because existing trail routes in the area are limited. Only a small portion of this area is accessible by existing trails. New trails or access that would be created for recreation or resource development would be analyzed and mitigation attached to minimize impacts to subsistence resources and uses.

Evaluation of the Availability of Other Lands

Alternative C would manage BLM lands in the subunit following the BLM mission of multiple use, while at the same time protecting priority habitat and enhancing natural resource values. Other lands in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are conservation system units. Other BLM-managed lands in Alaska either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate the other uses of public lands otherwise needed for subsistence include the no action and four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative C would not significantly restrict subsistence use by communities in the planning area. Most impacts to subsistence resources and uses would be negligible, and any impacts from the limited amount of development expected to occur would be minimized by the locatable and leasing permit stipulations and SOPs discussed in Chapter 2 and Appendix A. The impacts to subsistence species would be expected to be localized and temporary, and would not be expected to impact resources at the population level. No impacts to access by subsistence users would be expected to occur.

As opportunities to harvest wildlife become more restrictive in other parts of the state, participation in the FCH seasons has increased. Most harvest occurs on lands not managed by the BLM. Conflicts due to competition are issues outside the scope of the Eastern Interior RMP/EIS. Efforts to reduce these conflicts would be accomplished through limits in regulations on hunting seasons, harvest limits, and methods and means, which are the responsibility of the Federal Subsistence Board and the Alaska Board of Game.

J.2.1.4. Fortymile Alternative D

Alternative D emphasizes active management to facilitate resource development on BLM lands in the subunit. Approximately 9 percent of BLM-managed lands would remain closed to mineral leasing and location (Maps 29 and 30). Travel and trail restrictions would be minimized. A smaller ACEC, focused on habitat protection management, and SRMA, focused on management of recreational use, would be identified. In other areas recreation management would focus on dispersed recreation and management of permits.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses from the increased level of development and use allowed by this alternative would be similar in nature to the other action alternatives, but greater in scope. Higher percentages of land would be available for leasable and locatable minerals and limits on OHV and recreation would be less than other alternatives.

Under Alternative D, the Fortymile ACEC would be 546,000 acres and continue to allow some protection to Fortymile caribou calving and postcalving habitat and Dall sheep habitat (Map 62). Most of the area would be open to location, entry and leasing of minerals. The potential impacts to caribou calving and postcalving would be the greatest in this alternative (section 4.4.1.7 Wildlife Fortymile Subunit). Mineral licks used by Dall sheep and “wild” and “recreational” segments of the Fortymile WSR would be closed to leasable and locatable mineral exploration and development.

Although exploration for oil and gas may occur on BLM-managed lands in the subunit, no development would occur under this plan. Proposals for development would be analyzed with a new NEPA process.

Exploration and development of locatable minerals under Alternative D is predicted to increase by 13 operations over the life of the plan. New access to more remote areas could be permitted in support of locatable mineral operations. Increased access would facilitate travel for hunting and trapping and benefit all users. Efforts to reduce competition would be accomplished through limits in regulations on hunting seasons, harvest limits, and methods and means, which are the responsibility of the Federal Subsistence Board and the Alaska Board of Game.

Fish and aquatic habitat resources, while not high value within the Fortymile WSR, would benefit from any use restriction, such as withdrawal to mineral entry, applied within the designations (Chapter 4.4.1.2 Fish and Aquatic Species Fortymile Subunit).

Cross-country summer use of OHV (limited to 1,500 pounds curb weight and less) would be allowed on all but about 54,000 acres of the 2,077,000 acres of BLM-managed lands in the subunit. The Middle Fork (including the North Fork and Champion Creek) and most of the Mosquito Fork, which would be the Semi-Primitive Zones, would remain closed to summer OHV use. Impacts would be similar to those for the No Action Alternative, which allows cross-country summer use on all BLM-managed lands in the Fortymile Subunit. This travel prescription is not likely to lead to increased participation by hunters for caribou, because most effort occurs along the highway and Chicken Ridge trail system. Participation by s for harvest of moose would not be expected to change based on current trends and because OHV prescriptions would remain much the same as current management. Participation is more likely to increase as a result of increasing population in the state and an increased demand for resources.

Evaluation of the Availability of Other Lands

Alternative D would manage BLM lands in the subunit to optimize resource use and development, with fewer restraints on commercial or recreation activity. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are considered conservation system units. BLM lands are managed by current planning documents that allow a mixture of development and conservation following BLM's multiple use mission, or are currently being evaluated through the planning process. State of Alaska and Native corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence use and resources include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative D would not significantly restrict subsistence use by communities in or near the planning area given the management parameters outlined in Chapter 2 of the main document and including the leasing stipulations and SOPs found in Appendix A *Required Operating Procedures and Fluid Mineral Leasing Stipulations*. Should the anticipated amount of potential locatable mineral development or other land uses expand this finding may need to be revised to take into account impacts to the FCH, moose and other subsistence resources and uses that cannot be mitigated.

J.2.1.5. Fortymile Alternative E (Proposed RMP)

The Proposed RMP, and the leasing stipulations and SOPs accompanying them, take into consideration all comments and concerns generated during the scoping and public comment process for the plan.

Alternative E (Proposed RMP) differs from Alternative C for the following decisions: 10 watersheds would be managed as Riparian Conservation Areas; domestic sheep, goats, and camelids would not be allowed in Dall sheep habitat; personal use of timber would be allowed on all lands; commercial timber sales would be considered on all but the Fortymile WSR, Eagle Recreational withdrawal, Fort Egbert Historic Site and the Fortymile and Mosquito Flats ACECs; commercial use of forest products would be considered on all lands; 745,000 acres would be closed to locatable and leasable minerals, 932,000 acres would be open with Standard Lease Terms and SOPs (Appendix A), and 201,000 acres open with minor constraints; SRMAs would be divided into five Recreation Management Zones; the Fortymile ACEC would be 362,000 acres and the Mosquito Flats ACEC would be added (37,000 acres); and interim travel management would be the same as Alternative A except GVWR would be changed to curb weight and 1,500 pound curb weight would be implemented on lands in and outside the Fortymile WSR, and motorboats would be allowed within the non-navigable segments of the Fortymile WSR. No summer OHV use would be allowed in the Mosquito Flats ACEC and no cross-country summer OHV use would be allowed in the Fortymile ACEC and Crucial Caribou and Dall Sheep Habitat.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses from this alternative would be similar to those for Alternative C with the exceptions listed above.

Under Alternative E, the Fortymile ACEC (362,000 acres) would be created to protect Fortymile caribou calving and post-calving habitat and Dall sheep habitat. The Mosquito Flats ACEC (37,000 acres) would be created to protect unique wetland features. The ACECs would remain closed to entry, location and leasing of minerals, subject to valid existing rights (Maps 31 and 63). Travel by OHV in the Mosquito Flats ACEC would be limited and no summer OHV use would be allowed.

An area of 685,000 acres would be delineates as Crucial Caribou and Dall Sheep Habitat to protect important habitat outside the Fortymile ACEC. Management prescriptions for the Crucial Caribou and Dall Sheep Habitat would be the same as the Fortymile ACEC except that the area would be open to entry, locatable and leasable minerals. Decisions for management of crucial caribou and Dall sheep habitat are outlined in Section 2.7.2.4.1.6. Wildlife in the Proposed RMP/Final EIS.

The Fortymile WSR Corridor would remain closed to fluid leasing and location of minerals. The ten RCAs, which overlap the WSR and Fortymile ACEC, would be closed to locatable and leasable minerals. Some exploration for leasable minerals on open BLM-managed lands would likely occur over the life of the plan. Development would be expected but could be limited due to predominantly low mineral potential on these lands. New access would be expected for exploration and development, which would lead to fragmentation of habitat and facilitate travel for hunting by all users.

Efforts to reduce competition for resources important for subsistence due to improved access would be accomplished through limits in regulations on hunting seasons, harvest limits, and methods and means, which are the responsibility of the Federal Subsistence Board and the Alaska Board of Game

New exploration and development activities for locatable minerals would be expected to be few under this alternative (Tables 4.3, 4.4, and 4.5. Analytical Assumptions). A NEPA analysis would be developed for each operation and impacts to subsistence uses mitigated through reclamation standards, stipulations, and SOPs (Appendix A).

Fish and aquatic habitat resources are not of high value within the WSR and ACECs, but would benefit from any use restriction applied within these designations (Chapter 4 Impacts Specific to the Fortymile Subunit Fish and Aquatic Species).

All of the current and historic calving and post-calving habitat in the Fortymile Subunit would be open to summer cross-county OHV use. Summer cross-country OHV use has been allowed on BLM-managed lands in the Fortymile through the current management (No Action Alternative). Interim travel management would continue to allow this use until the travel Management Plan is completed within five years of the Record of Decision.

Demands on fish, wildlife, and other natural resources for recreation would be expected to increase (Chapter 4, Section 4.2.4.3. Future Activities). OHV use to access resources would be expected to increase commensurately. With improvements in OHV technology users would be able to access more remote and difficult areas where summer cross-country use would be allowed. In the short-term (five years after ROD) no significant restrictions on subsistence uses would occur from interim travel management. Decisions on OHV access in the travel management plan would be analyzed through NEPA and an ANILCA Section 810(a) Evaluation and Finding completed. Longer-term impacts of travel management on subsistence uses would be analyzed at that time. RMP wildlife and ACEC prescriptions would create sideboards for travel management planning. Proposed RMP/Final EIS decisions on OHV weight (1500 curb weight) and width (50") limitations would apply to all lands once supplemental rules are completed after the signing of the ROD.

Evaluation of the Availability of Other Lands

Alternative E would manage BLM lands in the subunit following the BLM mission of multiple-use, while at the same time protecting priority habitat and enhancing natural resource values. Other lands in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are conservation system units. Other BLM-managed lands in Alaska either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the no action and four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative E would not significantly restrict subsistence use by communities in the planning area. Most impacts to subsistence resources and uses would be negligible, and any impacts from the limited amount of development expected to occur would be minimized by the locatable and leasable mineral permit stipulations and SOPs discussed in Chapter 2 and Appendix A. Surface Mining Regulations (43 CFR 3809) and BLM Alaska policy would further protect subsistence resources through required reclamation and fish and wildlife habitat rehabilitation performance standards. The impacts to subsistence species would be expected to be localized and temporary, and would not be expected to impact resources at the population level. No impacts to access by subsistence users would be expected to occur.

J.2.1.6. Fortymile Cumulative Case

The goal of the cumulative analysis is to evaluate the incremental impact of the current action in conjunction with all past, present, and reasonably foreseeable future actions in or near the planning area. The cumulative analysis considers in greatest detail activities that are more certain to happen, and activities that were identified as being of great concern during scoping. Actions considered in the cumulative analysis include, but are not limited to, the following activities (section 4.2.4 Cumulative Effects).

Development of minerals will continue to occur on state and private lands in the subunit. Effects will be similar to those described for activities on BLM lands. The level of activity is expected to be higher on state and private lands due to their higher mineral potential.

Pogo mine is an active gold mine located on state land in the Fortymile Subunit. Production began in 2006 and life of the mine was estimated at 10 years. Access is from the Richardson Highway via a 49 mile all season road. The mine site proper (425 acres) is adjacent to postcalving range and within summer, fall migratory and winter range of the FCH.

The Little White Man Prospect, located 35 miles northwest of Chicken (on high priority Native-selected lands), could be developed into a large-scale lode mine over the next 20 years. The site is within the calving area of the FCH. Access to the mine would likely be from the Taylor Highway and depending on stipulations attached to the right-of-way permit, could create access to resources important to subsistence and other users.

Commercial development of forest products will occur on state and private lands in the subunit. Roads created for other purposes may be utilized for access to forest products. The State of Alaska Upper Yukon Area Plan recognized the potential for forest product sales in the remote North Fork region, which is an area of core calving for the FCH. The Pogo mine road extended the forest road farther to the east, furthering potential access to timber.

The Upper Yukon Area Plan (ADNR 2003) identified several areas along the Taylor Highway as appropriate for settlements and commercial enterprises. Areas designated for possible disposal in the Jack Wade Junction area and between Taylor Mountain and Chicken could impact FCH migration patterns and create conflicts over hunter access. The FCH migrate along the ridge system and funnel through Jack Wade Junction.

Military aircraft use is allowed in Military Operation Areas (MOAs) over much of the Fortymile Subunit and is likely to increase. Impacts to wildlife resources important to subsistence could potentially occur. Current practices by the military of avoiding exercises during caribou calving and implementing minimum ceilings have reduced, but not eliminated impacts to caribou.

Research, monitoring and other land management activities will continue on all lands in the subunit and include access to remote areas by fixed-wing and rotary aircraft, snowmobiles and other OHVs. Disturbance from these activities is localized and temporary.

Climate change would benefit some subsistence resources and negatively affect others. Changes in species distribution, biodiversity, and vegetation communities in subarctic areas are predicted to occur by 2040. Frequency and severity of natural wildland fire in Interior Alaska are predicted to increase and result in shifts to deciduous and shrub-dominated landscapes, which could benefit moose and some furbearers, but not caribou. Predicted increases in water temperatures would alter chemical and biotic conditions to the detriment of diversity and abundance of fish species important for subsistence use. Drying of lakes, thermokarsting, and other changes related to thawing or permafrost would be expected to impact subsistence resources (Section 4.3.1.1.2. Climate Change). Through adaptive management BLM would mitigate impacts to subsistence resources as practicable.

BLM has received a proposal for a gas line which would traverse some BLM-managed lands as well as adjacent lands. Options for a gas lines include routing along the Trans-Alaska Pipeline to Delta Junction and then south toward Glennallen or along the Alaska Highway to Alberta, Canada. Although these routes would take the gas line through the subunit, co-locating with the Trans-Alaska Pipeline and along existing transportation corridors would create negligible impacts on subsistence resources.

The population of Fairbanks and the surrounding area is predicted to increase by about 10 percent from the 2000 census to the 2020 census. Development of a gas line or other projects may boost the population beyond the estimate. Demands for recreation and subsistence resources are predicted to increase between 10 and 15 percent over the next 20 years.

Conveyance of remaining selected lands to the state and Native corporations is ongoing. Planning area wide, about 1.1 million acres are in selection by Native corporations (ANCSA 1971) and 1.4 million acres are in selection by the State of Alaska. Once conveyed, management of fish and wildlife harvest would be predicated on state regulations. Based on joint state/federal harvest management of moose and caribou in the subunit, no impacts to subsistence users would be expected to occur.

Features of Alternative A that would affect subsistence uses the most are summer cross country use of OHV; however, subsistence uses would also benefit because BLM-managed lands would be withdrawn from mineral entry, except for valid existing claims. Alternative B would best protect subsistence resources and uses in concert with actions occurring adjacent to BLM-managed lands in the Fortymile Subunit because the Fortymile ACEC would be created to protect caribou and sheep, 10 RCAs would be created, approximately 57 percent of lands would be closed to mineral entry, and sensitive areas would be closed to summer OHV use (626,000 acres) and the remaining area would be limited to use on existing trails. Alternative C would somewhat increase impacts to subsistence resources and uses collectively with the cumulative case. More area would be open to summer OHV use (existing trails), more area would be open to mineral entry (approximately 67 percent), and only one RCA would be recognized. Alternative D would have the greatest potential impacts on subsistence resources and uses when added to decisions by adjacent land managers. About 81 percent of BLM-managed land would be open to mineral entry with one RCA and 97% would be open to cross-country summer OHV use. Alternative E would result in about 64 percent of BLM-managed land open to minerals, 10 RCAs would be created, and the Mosquito Flats ACEC would be created and closed to summer OHV use. The ACECs would be closed to mineral entry. Interim travel management would allow cross-country summer use of OHV until the travel management plan is completed within five years of the ROD. Alternative B when combined with the cumulative case would have the least impacts on subsistence uses.

Evaluation of the Effects of Use, Occupancy, or Disposition

According to the fish and wildlife analysis in Chapter 4 of the Eastern Interior RMP/EIS, the combination of ongoing locatable mineral development occurring on state, federal and private lands in the subunit and future development projected for the subunit, would have cumulative impacts on Fortymile caribou. The privatization of State of Alaska or Native corporation lands could lead to additional development. Depending on the location of development, these impacts could include: short or long-term disturbance to caribou calving habitat, insect relief habitat, and migratory routes; disruption of caribou movements; stress and disturbance impacts to caribou during all seasons of the year; and possible reductions in herd productivity. If significant activity occurred within the calving grounds or crucial insect relief habitat, these impacts could be significant.

Development of access roads and trails within the planning area would have the potential to negatively affect wildlife, and thus affect subsistence. These impacts would include habitat fragmentation, increased human access into wildlife habitats, increased disturbance impacts, increased potential for mortality and possible alteration of behavior or movement patterns of wildlife. This could also result in an increase in recreational use of the area, resulting in additional competition with subsistence users for resources. Subsistence users have reported that competition from other hunters displaces them from traditional use areas to less familiar and productive hunting areas (Chapter 4 Section 4.4.4.4).

Evaluation of the Availability of Other Lands

The Cumulative Case, as presented in the planning document, contains information on reasonably foreseeable activities that could have an effect on the management decisions analyzed as part of the RMP/EIS. The purpose of the Cumulative Case is to present known ongoing activity by all entities on all lands near or within the planning area, as well as those activities that have been proposed for the future and are likely to occur. The Cumulative Case is not an alternative, but instead is a discussion of impacts that could be additive to and affect the management decisions contained within Alternatives A through E. As such, no other lands are evaluated under the Cumulative Case.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this Resource Management Plan, as well as Alternative A. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative D when combined with the cumulative case, as presented in this analysis, may result in a reasonably foreseeable and significant restriction of subsistence use for rural communities within the planning area if significant activity occurs within the calving grounds or other crucial habitat of the FCH. Currently, the FCH is a primary subsistence resource for numerous communities in rural Alaska (Gross 2007). Alternatives A-C when combined with the cumulative case would not result in significant restrictions. No reasonably foreseeable significant restrictions have been identified for Alternative E (Proposed RMP) when combined with the cumulative case because most habitat important to subsistence resources is within the ACEC or afforded protection by other management prescriptions.

J.2.2. Evaluation and Finding for Steese Subunit

J.2.2.1. Steese Alternative A

Selection of Alternative A would result in continued management of the Steese Subunit as specified in the 1986 Steese National Conservation Area Resource Management Plan (Plan). Valid decisions contained in the Plan would be implemented if not already completed. Direction contained in existing laws, regulation and policy would also continue to be implemented, sometimes superseding provisions in the Plan. The current levels, methods and mix of multiple use management of public land in the planning area would continue, and resource values would receive attention at present levels. In general, most activities would be analyzed at the project level and few uses would be limited or excluded as long as they were consistent with state and federal laws. ANCSA 17(d)(1) withdrawals would remain in place, prohibiting new mineral entry or mineral leasing on all BLM-managed lands. Wildland fire would be managed consistent with the Alaska Land Use Plan Amendment for Wildland Fire and Fuels Management (BLM 2004b, 2005c).

Evaluation of the Effects of Use, Occupancy, or Disposition

Under Alternative A, the primary impacts to subsistence would be associated with proposed land use, including placer mining on existing valid claims, and continuation of the current management of Recreation and Off Highway Vehicle (OHV) use as described in the Plan.

Management of resources, including water, cultural and paleontological, fish, wildlife, and vegetation, and of resource uses, including mining and lands activities, requires inventory and monitoring of conditions and populations and field site visits for compliance examinations. Activities that support data collection may displace subsistence resources from traditional harvest areas. Disturbance from the use of aircraft and OHV during management surveys will be temporary and localized and will not affect any fish, wildlife or vegetative resources at the population level. Inventory and monitoring efforts will benefit subsistence resources by providing valuable data on distribution and population parameters.

Under Alternative A, BLM-managed lands in the subunit would be withdrawn from mineral leasing and entry under ANCSA 17(d)(1). Mining is limited to valid existing claims. Alternative A would result in the greatest protection to fisheries, aquatic and riparian habitats.

Fish, wildlife and vegetative resources in the Steese Subunit have been and continue to be impacted by placer mining. Although the subunit is closed to mineral location and entry under Alternative A, valid existing claims continue to be worked within BLM and adjacent state-managed lands. Currently, 106 miles of stream and 7,200 acres of riparian area have been mined or could be mined. Under Alternative A it is estimated that 6 miles of stream and 370 acres of riparian land presently undisturbed would be impacted by mining. Indirect impacts above and below operations are estimated to double that projection. Impacts include degraded pool and spawning habitat quality due to catchment erosion and downstream sedimentation.

Properly functioning streams, and therefore watersheds, require well vegetated stream channels. Placer mining has been conducted within the state using methods that denude and relocate streams, resulting in turbidity, sedimentation, loss of habitat for fish, aquatic species and riparian dependent wildlife, increased aufeis and scouring, susceptibility to erosion and many indirect impacts. Primary production is reduced and low levels of nutrients are available in mining disturbed systems. High levels of minerals released from substrates during mining can be high enough to kill fish and other aquatic organisms. Arsenic and mercury, commonly associated with placer mining, are hazardous to fish, particularly salmonids (such as coho salmon and Arctic grayling). Rates of vegetation return are very slow in the subarctic setting of the Eastern Interior, requiring 50 or more years for adequate vegetation, land forms and large woody debris to recover to beginning levels of function. Where stream substrates are embedded with sediments and siltation from mining, recovery can take even longer, particularly below mined sites and at lower gradients (Weber and Post 1985). Reclamation projects in Eastern Interior designed to help systems recover to proper functioning conditions have largely failed (Impacts Common to All Subunits, section 4.3.1.4 Fish and Aquatic Species).

Stream buffers greatly reduce the effect of surface-disturbing activities in riparian systems on fish and aquatic habitats. Stream buffers within one-half mile of the banks of the Birch Creek WSR are withdrawn from locatable minerals under ANILCA (for all alternatives). Preserving riparian and stream bank vegetation through buffers largely mitigates impacts to aquatic systems from placer mining and is recommended as a means for maintaining proper functioning condition on all streams (USDA and DOI 2000).

Under Alternative A, the greatest impact to subsistence resources and uses would result from continuing current management standards of OHV and recreational use in the Steese Subunit. Cross-country summer travel by OHV 1,500 GVWR and under would generally be allowed in the Steese National Conservation Area and on other BLM-managed lands in the subunit. The Birch Creek WSR Corridor and RNAs would be closed to OHV use. Cross-country summer use has resulted in a network of user-created trails. Unmanaged trial proliferation would continue under Alternative A.

With fewer restrictions on OHV use and no established limits on visitor use, impacts to subsistence resources could occur at increasing levels. Recreation and OHV use is predicted to continue increasing with population growth in the state and as OHV technology continues to advance. Cross-country access could increases competition for harvest of wildlife resources by all users and can lead to direct and indirect impacts to fish, wildlife and habitat. Relief for subsistence users from increased harvest pressure would be through the Federal Subsistence Board and Alaska Board of Game regulatory processes.

Social trail proliferation often occurs when use is not limited to designated or existing trails, which increases the opportunity for introduction and spread of non-native invasive plant (invasive plant) species. Invasive plant species alter vegetative communities and fish and wildlife habitats, usually to the detriment of native species. Stream crossings by OHV could result in multiple impacts to fishery resources through stream bank erosion, sedimentation and pollutants (solvents and fuels), which could result in direct mortality of fish and diminished water quality. Fish habitat would be impacted by these as well as OHV trampling of stream side vegetation. Non-native invasive species, such as aquatic plants and invertebrates harmful to fish, can be introduced in waterways when OHV harboring them cross rivers and streams. (If it is appropriate to address mitigation in the 810, here is where we would say mitigation of impacts would largely be through outreach and education.)

During scoping for the plan no concerns specific to subsistence resources or uses in the Steese Subunit were raised, although general comments are common to all subunits.

The Fortymile caribou herd is an important subsistence resource for local residents. Based on registration permit data, residents of the Central area compose a majority of the local participants who hunt in the subunit (Chapter 3 Affected Environment).

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative A would be to continue the current management of BLM-managed lands in the subunit under the 1986 Steese RMP. Other federal public lands in the subunit are managed under National Park Service (Yukon-Charley Rivers National Preserve) or U.S. Fish and Wildlife Service (Yukon Flats NWR) planning documents. Other BLM lands in the state either already have land use planning documents in place, or are being addressed by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan, and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative A would not significantly restrict subsistence use by communities in and adjacent to the planning area, as impacts to subsistence resources would be minimal. Under this alternative the ANCSA 17(d)(1) withdrawals would be retained, prohibiting new leasable and locatable mineral activities on BLM lands. The current levels, methods and mix of multiple uses would continue. Impacts to subsistence species would be expected to be localized and would not be expected to impact resources at the population level. No impacts to access by subsistence users would be anticipated.

J.2.2.2. Steese Alternative B

Alternative B emphasizes active measures to protect and enhance resource values. Production of minerals and services would be more constrained than in Alternatives C or D and in some areas, uses would be excluded to protect sensitive resources. The Steese Area of Critical Environmental Concern (ACEC) and Special Recreation Management Areas (SRMA) would be identified, and specific measures would be proposed to protect or enhance values within these areas. One eligible river, Big Windy Creek (wild) has been recommended as suitable for designation under the Wild and Scenic River Act. Limited areas would be proposed for Off Highway Vehicles (OHV) to protect habitat, soil and vegetation resources. Approximately 96 percent of BLM lands in the subunit, including the Steese National Conservation Area, would be closed to mineral entry and leasing to protect or maintain resource values (Map 32 and 33).

Evaluation of the Effects of Use, Occupancy, or Disposition

The analysis of effects from Alternative B concludes that impacts as a result of management actions or designations within the planning area will not result in significant reductions in subsistence resources or uses. Many of the proposed actions serve to positively impact subsistence in that management would emphasize habitat and resource protection. While some development activity could occur under this alternative, areas of priority habitat would be protected by special designation and by the stipulations and SOPs as presented in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*. Actions such as the creation of new SRMAs, ACECs, and/or the designation of river segments as WSRs, do not limit or impose any restriction on subsistence use as per ANILCA Title VIII.

The Steese National Conservation Area and Birch Creek WSR Corridor would be designated as a special recreation management area (SRMA). The Steese ACEC (927,000 acres), which is within the SRMA, would be created to protect current and historic calving and postcalving habitat for Fortymile caribou and habitat for Dall sheep. The entire SRMA would remain closed to entry, location and leasing of minerals, subject to valid existing rights. The SRMA would be generally free of summer motorized use. Winter use of snowmobiles would be allowed, except within the Research Natural Areas (3,000 acres). Established trails may be designated or future trail development allowed if compatible with the purpose of ACEC. The ACEC would be a right-of-way avoidance area. The two Research Natural Areas would be within Primitive Management Zones and would be managed as with the Primitive filter: right-of-way avoidance areas, closed to all mineral development, closed to aircraft and to OHV. Some exploration on other lands for leasable minerals, particularly those around Circle, may occur over the life of the plan but is expected to be minimal because limited potential and interest exist.

Travel outside the Primitive RMZ would allow cross-country winter use of snowmobiles 1,500 pounds curb weight and less. Permits would be required for all other motorized vehicle use. Recreation in the area will largely be managed for Semi-Primitive or Backcountry values (Appendix H, Section H.2, “Steese Special Recreation Management Area”). These prescriptions will limit impacts to subsistence resources and uses.

Twenty-one watersheds in the Steese subunit have been identified to be managed as Riparian Conservation Areas (RCA). RCAs are watersheds that contain the highest fisheries and riparian resources. Emphasis is on protection of riparian-dependent resources and management of activities subject to specific standard operating procedures (Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*).

Under Alternative B, it is estimated that 7 miles of stream and 500 acres of riparian land presently undisturbed would be impacted by mining of locatable minerals. Indirect impacts above and below operations are estimated to double that projection. Impacts to fish and aquatic resources would be low because only 9 percent of total stream miles managed by BLM are open to locatable minerals.

Areas important to fish and wildlife subsistence resources would be largely protected because they would be within the National Conservation Area, Birch Creek WSR Corridor, ACEC, RCAs, and SRMA.

Evaluation of the Availability of Other Lands

Alternative B would manage BLM public lands in the Steese Subunit in order to optimize conservation. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the state either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the No Action and the action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Analysis of effects from Alternative B concludes that impact as a result of management actions or designations within the planning area will not result in significant reductions in subsistence resources or uses by residents in the subunit. Most impacts to subsistence resources would be beneficial, and any impacts by way of the limited amount of development allowed to occur under this alternative would be minimized by leasing stipulations and SOPs (Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations* and Chapter 2).

J.2.2.3. Steese Alternative C

Alternative C emphasizes a moderate level of protection, use, and enhancement of resources and services. Constraints to protect resources would be implemented, but would be less restrictive than under Alternative B. This alternative would designate a smaller ACEC; however the Special Recreation Management Area would remain the same (the entire Steese National Conservation Area and Birch Creek WSR Corridor). The ten Recreation Management Zones (RMZs) would change in area with a shift away from Primitive RMZs and the introduction of Middlecountry and Frontcountry RMZs. No rivers would be recommended as suitable for designation under the WSRA. Approximately 78 percent of the area managed by BLM would remaining closed to mineral entry and leasing (Maps 34 and 35). Most of the ACEC and a portion of the caribou migration corridor would be closed to mineral entry.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses from the increased level of development allowed by this alternative would be similar in nature to those of Alternative B except under Alternative C more acres would be available for authorized mineral exploration and development and expanded use of OHV 1,500 pounds GVWR without a permit would be allowed. Reduced protection for caribou migration corridors may result in habitat fragmentation.

Under Alternative C, a smaller Steese ACEC (460,000 acres) would be created to protect caribou calving and postcalving habitat and Dall sheep habitat. The proposed ACEC would remain closed to entry, location and leasing of minerals (except salable mineral disposal could be authorized), subject to valid existing rights. All Dall sheep and most of the current and historic calving and postcalving habitat would remain closed to mineral location and entry (section 4.5.1.7 Wildlife Steese Subunit). Seasonal restrictions within one mile of ungulate mineral licks would apply to all permitted uses.

The Birch Creek WSR Corridor would remain closed to fluid leasable and locatable minerals. In areas where allowed, oil and gas leasing would be subject to constraints to protect caribou and Dall sheep habitat and subsistence uses.

Some exploration on other lands for leasable minerals may occur over the life of the plan, but is expected to be minimal. Development of locatable minerals is predicted to be small but may require new access, which could facilitate travel for hunting and increase competition for subsistence resources.

Placer mining activity under Alternative C is estimated to double the number of operations expected under Alternative A and B. Twenty-three miles (5 percent) of the approximately 492 miles of stream open to locatable minerals would be in RCAs and would be subject to more rigorous reclamation standards than those outside the RCAs. Standard SOPs and stipulations would apply to the remaining areas. Much of this area is moderate to high mineral potential. High value fishery resources supported by the Birch Creek drainage include three species of salmon and several species of resident fish. Adverse impacts to fish and aquatic resources would potentially result in downward trends in fish populations at the watershed scale, which could have far reaching impacts on subsistence resources and uses. Impacts from mining are further discussed in section J.2.1 and are common to all alternatives for qualitative impacts from mining, but differ quantitatively by alternative.

The Pinnell Mountain Trail is closed to summer motorized travel. Primitive areas (RNAs) would be closed to all motorized use except by permit or approved Plan of Operations. The Semi-Primitive and Backcountry Zones would remain closed except for cross-country winter use of snowmobiles 1,500 GVWR and under or by permit. The southern ACEC in the Semi-Primitive RMZ would be generally closed to summer motorized use. Undesignated recreation lands, Middlecountry and Frontcountry RMZs would be open to winter cross-country use and to summer use on existing trails, except that off-trail retrieval of down game would be allowed (the northern ACEC is within a Middlecountry RMZ). Vehicles of 10,000 pounds curb weight and under would be allowed on existing roads only. Permits or an approved Plan of Operations would be required for any other OHV use.

Numerous existing trails occur throughout the Middlecountry and Frontcountry RMZs, mostly developed for mining. Established trails could be designated or future trail development allowed if compatible with the purpose of ACEC. Off-route game retrieval could increase participation by all hunters. The potential increase in impacts to subsistence resources and uses from travel management prescriptions in this alternative would be minor, particularly compared with the No Action Alternative (current situation), Alternative D, and interim management in Alternative E.

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative C is to manage BLM lands in the subunit following the BLM mission of multiple use, while at the same time protecting priority habitat and enhancing natural resource values. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the state either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative C would not significantly restrict subsistence use by communities in the planning area. Most impacts to subsistence resources and uses would be minor, and any impacts from the development allowed to occur would be minimized by the leasing stipulations and SOPs discussed in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*. With the exception of locatable minerals, impacts to subsistence resources would be expected to be localized and temporary, and would not be expected to impact resources at the population level. SOPs and leasing stipulations to protect riparian and aquatic habitats would be necessary to mitigate impacts from placer mining. No impacts to access by subsistence users would be expected to occur.

Competition for subsistence resources, particularly for caribou and moose, occurs due to easy access from the Steese Highway and the large number of hunters. As opportunities to harvest wildlife become more restrictive in other parts of the state, participation in the FCH seasons has increased. Conflicts due to competition are largely issues outside the scope of the Eastern Interior RMP/EIS. Efforts to reduce these conflicts would be accomplished through limits within regulations on hunting seasons, bag limits and methods and means, which are the responsibility of the Federal Subsistence Board and Alaska Board of Game.

J.2.2.4. Steese Alternative D

Alternative D emphasizes active management to facilitate resource development on BLM lands in the subunit. Approximately 54 percent of BLM-managed lands in the subunit would be open to mineral leasing and location (Maps 36 and 37). Travel and trail restrictions would be minimized. A smaller ACEC, focused on managing for habitat protection, would be identified.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses from the increased level of development and use allowed by this alternative would be similar in nature but greater in extent, relative to the other action alternatives. Higher percentages of land would be available for leasable and locatable minerals and limits on OHV and recreation would be less.

Under Alternative D the Steese ACEC would be 193,000 acres and remain closed to locatable and leasable mineral entry, subject to valid existing rights. Areas important to wildlife that would be open to mineral location and entry include portions of the current White Mountains caribou calving and postcalving habitat, historic Fortymile calving, postcalving, and migration habitat, and a movement corridor to the Preacher Creek Dall sheep mineral lick. Impacts from development of locatable minerals include direct disturbance to wildlife on priority habitats, fragmentation of habitat through important movement corridors, and long-term impacts to streams and riparian habitats from placer mining (section 4.5.1.2 and 4.5.1.7 Fish and Aquatic Species, Wildlife Steese Subunit respectively). Wildlife habitat areas open to locatable minerals would be also open to summer cross-country OHV use. Most impacts would continue beyond the life of the plan.

Approximately 6 percent of the 975 miles of stream open to locatable minerals under Alternative D would be within RCAs, which require higher standards for reclamation. Forty-five stream miles in the Preacher Creek drainage classified as anadromous would be open to locatable mineral entry under Alternative D. (Under Alternative B and C the area is closed to locatable minerals). The Preacher Creek drainage is also important as production area for grayling. Over the life of the plan, projections are that approximately 15 miles of stream would be mined, affecting at least 30 miles of stream. Further discussion of impacts from mining is developed in Section J.2.1 of this evaluation and finding.

Although open to oil and gas leasing, no activity, except for geophysical exploration, would occur on BLM-managed lands in the subunit under this plan. Proposals for development would be analyzed with a new NEPA process. Any exploration that might occur is expected to be on BLM-managed lands around Circle. Seismic exploration would occur during the winter with specified frost and snow depth. Exploration activity is expected to be minimal and standard stipulations and SOPs, including seasonal closures in priority habitat areas, would apply (Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*). Testimony by community members on the North Slope has indicated that seismic exploration can interfere with cross-country snowmobile use in that the deep ruts left in the snow by seismic vehicles are difficult to traverse, adding to “wear-and-tear” on snowmobiles and sleds (SAP Minutes, June 6, 2002 meeting; Harry Brower, personal communication). However, seismic exploration, which would be expected to be minimal, does not create a substantial barrier and presents only temporary displacement of subsistence resources.

Any permitted use around designated ungulate mineral licks would be restricted within one-half mile during May 10 through September 1 and closed to development of facilities that would be used during that time.

The southern portion of the proposed Steese ACEC would remain generally free of summer motorized vehicle use. Where summer use would be allowed, it would be restricted to designated trails. RNAs carry the only Primitive designations and would be closed to OHV use without a permit or Plan of Operations. Limited areas around the Pinnell Mountain Trail and the Birch Creek WSR Corridor would be designated as Semi-Primitive. Wolf Creek and Rocky Mountain Uplands would be designated as Backcountry. Semi-Primitive and Backcountry would be open to cross-country winter use by snowmobiles (weight limits apply) and all other OHV use with a permit or Plan of Operations. The Pinnell Mountain Trail would be closed to all motorized use.

The undesignated recreation lands, which include those around Circle, the Middlecountry and the Frontcountry RMZs would be open to locatable and leasable minerals. Middlecountry and Frontcountry would be designated within the Steese National Conservation Area and include the Preacher Creek drainage, Clums Fork and Harrison Creek. Cross-country winter and summer use of OHV 1,500 GVWR and under would be allowed in these three designations. Vehicles 10,000 pounds curb weight and under would be allowed only on existing roads and all other would be by permit or approved Plan of Operations.

Use of OHV under this alternative would have similar intensity and scope of impact on subsistence resources and uses as Alternative A, where cross-country summer and winter use would be generally allowed throughout the entire subunit. (The RMZs closed to summer cross-country use are largely inaccessible by OHV.) Competition for resources, particularly during Fortymile caribou seasons, would continue at the same level or rate of increase as for Alternative A. Impacts to subsistence fisheries would be similar to Alternative A from unmanaged proliferation of trails crossing streams and causing erosion and sedimentation.

Evaluation of the Availability of Other Lands

Alternative D would manage BLM lands in the subunit to optimize resource use and development, with the fewest restraints of all alternatives on commercial activity (minerals and forest products) and the fewest limitations on travel management and recreation activity of the action alternatives. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and wide-scale development of these lands is limited or disallowed by the mission and goals of these federal lands as conservation system units. BLM lands are managed by current planning documents that allow a mixture of development and conservation following the BLM multiple-use mission, or are currently being evaluated through the planning process. State of Alaska and Native corporation lands cannot be considered in a BLM plan and BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence use and resources include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative D would not significantly restrict subsistence use by communities in or near the planning area given the management parameters outlined in Chapter 2 of the main document and including the leasing stipulations and SOPs found in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*. Should the amount of oil and gas exploration, anticipated area of potential locatable mineral development, or other land uses expand beyond the reasonable development scenarios in this plan, the finding may need to be revised to take into account impacts to the White Mountains caribou herd (WMCH), FCH and other subsistence resources and uses that cannot be mitigated.

J.2.2.5. Steese Alternative E

Alternative E (Proposed RMP) differs from Alternative C for the following decisions: 21 RCAs would be identified; domestic sheep, goats and camelids would not allowed in Dall sheep habitat; personal use of timber would be allowed on all BLM-managed lands; commercial timber sales would not be allowed within the WSR, RNAs and Steese Crucial Caribou and Dall Sheep Habitat (526,000 acres); no transportation corridors would be retained and no new transportation corridors would be designated; 1,237,000 acres would be closed to leasable and locatable minerals, subject to valid existing rights; SRMA would include nine RMZs; and interim travel management would be the same as Alternative A with some exceptions. The exceptions for interim travel management would be: airboats and hovercraft would be allowed and OHV would be limited to 1,000 curb weight and 50 inch width for snowmobiles and summer OHV in the Steese National Conservation Area and Birch Creek WSR (replaces 1,500 pound GVWR); . Use of OHV in the RNAs would be limited and allow for winter use by snowmobiles. Cross-country OHV use by all users within Crucial Caribou and Dall Sheep Habitat would not be allowed without a permit. Impacts to subsistence uses from decisions in Alternative E are analyzed in Chapter 4 Section 4.5.4.4.6. Of most concern for subsistence uses would be continued summer cross-country use of OHV and allowing use of airboats and hovercraft.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses from the decreased level of development allowed by this alternative would be similar in nature to those of Alternative B. The threat of habitat fragmentation within the Steese National Conservation Area, especially of caribou migration corridors, would be essentially eliminated by this alternative because the Steese National Conservation Area would be closed to locatable and leasable minerals and the WSR, RNA and Crucial Caribou and Dall Sheep Habitat would be closed to commercial timber sales. Interim travel management would have the same OHV designations as Alternative A: Primitive would be closed to summer use of OHVs and Semi-Primitive units would be open to summer OHV (GVWR would be replaces as described above.)

All Dall sheep and most of the current and historic calving and post-calving habitat would be closed to mineral location and entry (section 4.5.1.7 Wildlife Steese Subunit). Seasonal restrictions within one mile of ungulate mineral licks would apply to all permitted uses.

Approximately 30,000 acres of BLM-managed lands near Circle would be open to locatable and leasable minerals. Some exploration for leasable minerals may occur on these lands over the life of the plan, but would be expected to be minimal. Development of locatable minerals is predicted to be small due to low mineral potential but would require new access, which could facilitate travel for hunting. While increased access would improve travel for harvest of subsistence resources it could limit resource availability through increased hunting pressure by all users.

Development of minerals and associated access would require permits, which would be analyzed for impacts on a site-specific basis. Through analysis, mitigation measures would be developed and an ANILCA Section 810(a) evaluation and finding completed. The BLM-managed lands are bordered by native corporation and village lands and state and refuge managed-land. Further, access to the BLM-managed lands for leasable or locatable mineral exploration or extraction would require permits from one or more of the adjacent land owners/managers.

All Dall sheep and most of the current and historic calving and post-calving habitat would be open to cross-county summer OHV use. Cross-country OHV use has been allowed in the Steese National Conservation Area except in RNAs, the WSR, and Pinnell Mountain Trail, through the current Steese National Conservation Area RMP (1986). Interim travel management would continue to allow this use until the Travel Management Plan is completed within five years of signing the Eastern Interior RMP Record of Decision. Demands on fish, wildlife, and other natural resources for recreation would increase (Chapter 4, Section 4.2.4.3.). OHV use to access resources would increase and with improvements in OHV technology allow users to access more remote and difficult areas cross-country. In the short-term (five years after ROD signed) no significant restrictions on subsistence uses would occur. Decisions on OHV access in the Travel Management Plan would be analyzed and an ANILCA Section 810 Evaluation and Finding completed. Longer-term impacts from travel management decisions on subsistence uses would be analyzed at that time.

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative E is to manage BLM lands in the subunit following the BLM mission of multiple use, while at the same time protecting crucial and priority habitat and enhancing natural resource values. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the state either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State and native corporation lands cannot be considered in a BLM plan and BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2. Evaluation of impacts to subsistence uses and resources and findings for Alternatives A-E are contained within this appendix to the Proposed RMP/Final EIS.

Findings

Alternative E would not significantly restrict subsistence use by communities in the planning area. Most impacts to subsistence resources and uses would be minor, and any impacts from the development allowed to occur would be minimized by the leasing stipulations and SOPs discussed in Appendix A, *Standard Operating Procedures and Fluid Mineral Leasing Stipulations*. Impacts to subsistence resources would be expected to be localized and temporary, and would not be expected to impact resources at the population level. SOPs and leasing stipulations to protect riparian and aquatic habitats would be necessary to mitigate impacts from placer mining. No impacts to access by subsistence users would be expected to occur. Availability and distribution of subsistence resources, particularly for caribou and moose, could change if hunting pressure increases due to continued cross-country access in the Steese National Conservation Area or from new access around Circle. Conflicts due to competition are largely issues outside the scope of the Eastern Interior RMP/EIS. Efforts to reduce these conflicts would be accomplished through limits within regulations on hunting seasons, bag limits, and methods and means, which are the responsibility of the Federal Subsistence Board and Alaska Board of Game.

J.2.2.6. Steese Cumulative Case

The goal of the cumulative analysis is to evaluate the incremental impact of the current action in conjunction with all past, present, and reasonably foreseeable future actions in or near the planning area. The cumulative analysis considers in greatest detail activities that are more certain to happen, and activities that were identified as of great concern during scoping. Actions considered in the cumulative analysis include, but are not limited to, the following (refer to Chapter 4 Cumulative Impacts).

The Fortymile caribou herd will be impacted by activities across its range. The herd presently ranges from north of the Yukon River in Yukon, Canada and into the Preacher Creek Drainage of the north Steese National Conservation Area and western fringe of the White Mountains NRA. Section J.2.1.5 of this appendix discusses the cumulative impacts of the following activities on subsistence resources in the Fortymile Subunit and would also apply in the Steese Subunit due to the migratory nature of the Fortymile caribou herd, proximity of Pogo Mine and Little White Man Prospect, commercial development of the Tanana Valley State Forest, and overflights in Military Operation Areas (MOA) airspace.

State land sales adjacent to the south Steese National Recreation Area have recently been opened as recreation parcels. Sales could result in increasing habitation and recreation use within the migration corridor of the Fortymile caribou herd.

Development of minerals will occur on state and private lands in the subunit. Effects will be similar to those described for activities on BLM lands, except that the level of activity is expected to be higher due to higher mineral potential, particularly on state lands between the north and south portions of the Steese National Conservation Area. This area is important to Fortymile caribou herd as a migration corridor and winter range.

Military aircraft use is allowed in MOAs over much of the Steese Subunit and is likely to increase. Impacts to wildlife resources important to subsistence could potentially occur. Current practices by the military to avoid exercises during caribou calving and implementing minimum ceilings have reduced impacts to caribou.

Research, monitoring and other land management activities will continue on all lands in the subunit and include access to remote areas by fixed and rotary wing aircraft, snowmobiles and other OHVs. Disturbance from these activities is localized and temporary.

Climate change will benefit some subsistence resources and negatively affect others. Changes in species distribution and vegetation communities in subarctic areas are predicted to occur by 2040. Frequency and severity of natural wildland fire in Interior Alaska are predicted to increase and result in shifts to deciduous and shrub-dominated landscapes; which may benefit moose and some furbearers but not caribou. Predicted increases in water temperatures would alter chemical and biotic conditions to the detriment of subsistence fish diversity and abundance. Increases in soil temperatures would result in drying of lakes and ponds.

The population of Fairbanks and the surrounding area is predicted to increase by about 10 percent from the 2000 census to the 2020 census. Development of a gas line or other projects may boost the population beyond the estimate. Demands for recreation and subsistence resources are predicted to increase between 10 and 15 percent over the next 20 years.

Conveyance of remaining selected lands to the State and Native corporations is ongoing. Planning area wide, about 1.1 million acres are in selection by Native corporations (ANCSA 1971) and 1.4 million acres are in selection by the State of Alaska. Fish and wildlife management of harvest would be predicated on state regulations on conveyed lands. Based on joint state/federal harvest management of caribou in the subunit, no impacts to subsistence uses would be expected to occur. Impacts to use of fish and other wildlife off BLM-managed lands may occur where state regulations are more restrictive than federal regulations on those lands.

Alternative B would better protect subsistence resources than Alternative E in concert with actions occurring adjacent to BLM-managed lands in the Steese Subunit because no summer use of OHV would be allowed. Alternative E would somewhat increase effects on subsistence resources and uses when considered with actions by other land managers adjacent to BLM-managed lands. Alternative D would potentially have the greatest impacts on subsistence resources and uses when added to decisions by adjacent land managers.

Evaluation of the Effects of Use, Occupancy, or Disposition

The combination of ongoing locatable mineral development and future projected development on state, federal, and private lands in the Steese Subunit in concert with activities in the Fortymile Subunit would have cumulative impacts on Fortymile caribou and potentially on White Mountains caribou under Alternative D (Sections 4.4.1.7.6, 4.4.4.4.7., 4.5.1.7.6., and 4.5.4.4.7.). The privatization of State of Alaska or Native corporation lands could lead to additional development. Depending on the location of development, these impacts could include: short or long-term disturbance to caribou calving habitat, insect relief habitat, and migratory routes; disruption of caribou movements; stress and disturbance impacts to caribou during all seasons of the year; and possible reductions in herd productivity. If significant developments occurred within the calving grounds or crucial insect relief habitat, these impacts could result in significant restrictions on subsistence uses. Development of access roads and trails within the planning area would have the potential to negatively affect fish and wildlife, and thus affect subsistence use. These impacts would include: habitat fragmentation; increased access into wildlife habitats; introduction of invasive species, increased disturbance impacts; increased potential for mortality and possible alteration of behavior or movement patterns of wildlife; stream bank erosion; sedimentation and pollutants (vehicle and OHV solvents and fuels), which can result in direct mortality of fish and diminished water quality; and OHV trampling of stream side vegetation. This may also result in an increase in recreational use of the area, which could alter availability and distribution of subsistence resources (Chapter 4 Section 4.5.4.4).

Evaluation of the Availability of Other Lands

The Cumulative Case, as presented in the planning document, contains information on existing impacts from past actions, impacts from current actions, and impacts from reasonably foreseeable activities that could have an effect on the management decisions being analyzed as part of the RMP/EIS. The purpose of the Cumulative Case is to present known ongoing activity by all entities on all lands near or within the planning area, as well as those activities that have been proposed for the future and are likely to occur. The Cumulative Case is not an implementable alternative that specifies land uses and management, and instead is a discussion of impacts that could affect the management decisions contained within Alternatives A through E. As such, no other lands are evaluated under the Cumulative Case.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this Resource Management Plan, as well as Alternative A. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative D when combined with the cumulative case, as presented in this analysis, could result in a reasonably foreseeable and significant restriction of subsistence use for rural communities within the planning area, if significant activity occurs within migration corridors or other crucial habitat of fish and wildlife. The level of impacts on subsistence use depend on the response to increased opportunity for development of locatable minerals and cross-country use of OHV under Alternative D. Currently, the FCH is a primary subsistence resource for numerous communities in rural Alaska (Gross 2007) and the herd could be impacted by activities on and adjacent to BLM-managed lands in the Steese and Fortymile subunits.

Management parameters outlined in Chapter 2 of the main document and the leasing stipulations and SOPs found in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations* would help mitigate the impacts. High locatable mineral potential occurs on BLM-managed lands in the Clums Fork and Harrison Creek portion of the south Steese National Conservation Area, most of which would be open to locatable minerals under Alternative D and would be likely to be developed. Locatable mineral potential in the north Steese National Conservation Area is mostly low in the open areas, however gold prices and relative accessibility of the area could lead to increased mining activity.

Alternatives A–C and E, when combined with the cumulative case, would not result in significant restrictions. No reasonably foreseeable significant restrictions on subsistence uses have been identified for the Alternative E (Proposed RMP) when combined with the cumulative case. Under Alternative E most habitats important to subsistence resources would be managed as Crucial

Caribou and Dall Sheep Habitat or afforded protection by other management prescriptions, including RCAs. Interim travel management in the Steese Subunit would have short-term effects on subsistence uses and would not significantly restrict uses. The Travel Management Plan would be developed in the five years after signing of the Steese National Conservation Area Record of Decision. Impacts would be analyzed through the NEPA process and an ANILCA Section 810 Evaluation and Finding would be conducted.

J.2.3. Evaluation and Finding for Upper Black River Subunit

The Black and Porcupine River areas are critically important to residents of the subunit for subsistence uses. During scoping for the plan, residents of the subunit stated that the Upper Black River area is vital for subsistence uses and resources, particularly for moose. Participants spoke of the importance of the area as a moose calving ground and corridor for moose moving between Canada and the Yukon Flats. Moose populations are at low numbers in the Yukon Flats area to the west and local subsistence users in the subunit depend on the Upper Black River area for harvest of moose. Most hunting for moose in the Upper Black River is typically in the fall. However, people travel into the area for moose in the winter when needed. Other participants stressed the importance of fish in the Black River to the communities, specifically whitefish, and the importance of salmon spawning areas, which benefits the whole Yukon drainage. In interviews with residents of the subunit, Caulfield (1983) documented use of the Upper Black for trapping, harvest of fish, vegetation, small mammals, moose, firewood and structural materials, bear and caribou (Map 98). Whitefish were identified as a stable food source for the area residents.

Residents of Circle extensively use areas in the subunit, primarily up and down the Yukon River into Yukon Flats NWR and Yukon-Charley Rivers National Preserve, but also have a long history of use into the Little Black River east of the community. Trapping in particular has been documented on BLM-managed lands in the subunit accessible from the community (Caulfield 1979). Most access is by snowmobile.

J.2.3.1. Upper Black River Alternative A

Alternative A would result in continuing to manage the Upper Black River Unit as is currently being done. No land use plan has been developed for the area and current management complies with direction contained in existing laws, regulation and policy. The current levels, methods and mix of multiple use management of public land in the planning area would continue, and resource values would receive attention at present levels. In general, most activities would be analyzed at the project level and few uses would be limited or excluded as long as they were consistent with state and federal laws. Wildland Fire would be managed consistent with the Alaska Land Use Plan Amendment for Wildland Fire and Fuels Management (BLM 2004b, 2005c).

The subunit is extremely remote and ongoing uses of BLM-managed lands consist primarily of subsistence or casual recreational use. Use of fish, wildlife and other subsistence resources are the most prevalent uses in the subunit, relied upon by nearly all residents, and protection of these resources was the highest concern during scoping meetings. Scattered BLM lands around the community of Circle are more accessible, but generally receive little use other than from local residents.

Due to lack of access and limited mineral potential few surface-disturbing activities would be expected in this subunit under any alternative.

Evaluation of the Effects of Use, Occupancy, or Disposition

Under Alternative A, the primary impacts to subsistence would be associated with recreational use.

Management of resources, including water, cultural and paleontological, fish, wildlife, and vegetation, and of resource uses requires inventory and monitoring of conditions and populations and field site visits for compliance examinations. Activities that support data collection could displace subsistence resources from traditional harvest areas. Most data collection in the area would be accomplished using fixed- or rotary-winged aircraft. Disturbance from aircraft during management surveys would be temporary and localized and would not affect subsistence uses or any fish, wildlife or vegetative resources at the population level. Inventory and monitoring efforts would benefit subsistence resources by providing valuable data on distribution and population parameters. These activities would occur in Alternatives A through E.

BLM-managed lands in the subunit would remain withdrawn from mineral location and leasing through ANCSA 17(d)(1). No existing mining claims occur in the subunit, therefore no impacts from mineral exploration or development to subsistence resources or uses would occur. Use of OHV, non-motorized vehicles, motorized watercraft, and aircraft would be unrestricted. Due to the remoteness of the area most use of motorized vehicles (snowmobile and boat) would be by local residents for subsistence purposes. Some use of aircraft occurs by other users. Recreation would be managed to reduce user conflicts and prevent resource damage. No impacts from management of recreation or travel would be anticipated.

Under Alternative A, no special designations would exist. Special designations, such as areas of critical environmental concern, generally convey a higher level of protection to resource values.

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative A would be to continue the current management of BLM-managed lands in the subunit. Other federal public lands in the subunit are managed under National Park Service (Yukon-Charley Rivers National Preserve) or U.S. Fish and Wildlife Service (Arctic NWR and Yukon Flats NWR) planning documents. Other BLM lands in the state either already have land use planning documents in place, or are being addressed by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented in Chapters 2 and analyzed in Chapter 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are discussed in Chapter 2.

Findings

Alternative A would not significantly restrict subsistence use by communities in and adjacent to the planning area, as impacts to subsistence resources would be negligible. Under this alternative the ANCSA 17(d)(1) withdrawals would be retained, prohibiting new leasable and locatable mineral activities on BLM-managed lands. The current levels, methods and mix of multiple uses would continue. Impacts to subsistence species would be expected to be localized and temporary and would not be expected to impact resources at the population level. No impacts to access by subsistence users would be anticipated.

J.2.3.2. Upper Black River Alternative B

Alternative B would emphasize active measures to protect and enhance resource values. Production of minerals and services would be more constrained than in Alternatives C or D and in some areas, uses would be excluded to protect sensitive resources. The Salmon Fork ACEC would be created to protect or enhance values within these areas. Values included would be maintaining water quality, salmon habitat, and protection of Porcupine caribou herd wintering grounds. The Salmon Fork of the Black River would been recommended as suitable for designation as wild under the Wild and Scenic River Act. Limited areas would be proposed for Off Highway Vehicles (OHV) to protect habitat, soil and vegetation resources. The area would remain closed to mineral entry and leasing in order to protect or maintain resource values. This alternative and Alternatives C-E would consider lands selected by the state and by Native or village corporations as if they were to be retained in long-term federal ownership.

Evaluation of the Effects of Use, Occupancy, or Disposition

The analysis of effects from Alternative B concludes that impact as a result of management actions or designations within the planning area will not result in significant reductions in subsistence resources or uses. Many of the proposed actions would serve to positively impact subsistence in that management would emphasize habitat and resource protection. While some development activity could occur under this alternative, habitat important to subsistence resources would be protected by special designation, and by the stipulations and SOPs as presented in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations.* Actions such as the creation of ACECs and/or the designation of rivers as WSRs would not limit or impose any restriction on subsistence use as per ANILCA Title VIII.

The Salmon Fork ACEC (621,000 acres, Map 69) would be created to protect many values. Those of most important value to subsistence protected by the designation would be aquatic habitat for all fish species in the portion of the watershed, including three species of salmon and whitefish, and caribou winter habitat. The area would remain closed to entry, location and leasing of minerals and would be closed to summer OHV use.

Evaluation of the Availability of Other Lands

Alternative B would manage BLM public lands in the Upper Black River Subunit in order to optimize conservation. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are conservation system units. Other BLM lands in the state either already have land use planning documents in place that specify the amounts and types of activities that could occur, or are currently being evaluated by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the no action and the four action alternatives that are presented in Chapters 2 and analyzed in Chapters 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are discussed in Chapter 2.

Findings

Alternative B would not significantly restrict subsistence use of or access to fish, wildlife and vegetative resources by residents in the subunit. Most impacts to subsistence resources would be beneficial, and any impacts by way of the limited amount of development allowed and expected to occur under this alternative would be minimized by stipulations and SOPs (see Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations* and Chapter 2).

J.2.3.3. Upper Black River Alternative C

Alternative C would emphasize a moderate level of protection, use, and enhancement of resources and services. Constraints to protect resources would be implemented, but would be less restrictive than under Alternative B. This alternative would designate an ACEC of the same area as Alternative B however it would be open to locatable minerals and no season limits on OHV use. No rivers would be recommended as suitable for designation under the WSRA.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses would potentially increase from decisions in this alternative. The remoteness of the area and low mineral potential render it likely that little or no development or increase in use would occur and impacts would be expected to be the same as for Alternative B.

Under Alternative C, the Salmon Fork ACEC would be the same acreage as Alternative B. The ACEC would be closed to leasable minerals, but the rest of the subunit would be open. The entire subunit, including the ACEC, would be open to locatable and salable minerals and to the year-round use of OHVs. Emphasis on improving riparian and aquatic habitat through reclamation would be afforded through RCAs within the Kandik and Salmon Forks. Some geophysical exploration on lands around Circle for fluid leasable minerals may occur over the life of the plan, but is expected to be minimal. Little or no exploration is expected in other areas of the subunit. Due to low potential and expected low level of interest, development of locatable minerals would be predicted to be small. Any applications for locatable minerals could include new access, which could facilitate travel for hunting and increase competition for subsistence resources. Applications for any land use would require a project level analysis to which stipulations to mitigate impacts to subsistence uses would be attached (Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*).

Summer cross-country use of OHV 1,500 pounds curb weight and under would be allowed throughout the area, including the ACEC. Use would not be expected to increase, because the remoteness of the location and difficulty of summer cross-country travel would limit OHV use.

Boat and winter cross-county snowmobile travel would be expected to be local and mostly in support of subsistence activities. Some use by recreational aircraft would be expected, mostly during state hunting seasons.

Although reduced protection to areas most important to fish, wildlife and vegetative subsistence resources would be afforded through this alternative, limited use and development would be anticipated and impacts to subsistence resources and uses would be negligible.

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative C would be to manage BLM lands in the subunit following the BLM mission of multiple use, while at the same time protecting priority habitat and enhancing natural resource values. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the state either already have land use planning documents in place that specify the amounts and types of activities that could occur, or are currently being evaluated by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the no action and the four action alternatives that are presented in Chapters 2 and analyzed in Chapters 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are discussed in Chapter 2.

Findings

Alternative C would not significantly restrict subsistence use by communities in the planning area. Most impacts to subsistence resources and uses would be negligible, and any impacts from the limited amount of development allowed to occur would be minimized by the leasing stipulations and SOPs discussed in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*. The impacts to subsistence species would be expected to be localized and temporary, and would not be expected to impact resources at the population level. No impacts to access by subsistence users would be expected to occur.

J.2.3.4. Upper Black River Alternative D

Alternative D emphasizes active management to facilitate resource development on BLM lands in the subunit. Unlike the other action alternatives, large and small commercial timber sales would be allowed in the ACEC. All ANCSA 17(d)(1) withdrawals would be revoked on lands retained in long-term federal ownership. The ACEC would be open to mineral leasing and location. No rivers would be recommended as suitable for designation under the WSRA.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses from the increased development and use allowed by this alternative would be similar to the other action alternatives.

Under Alternative D the Salmon Fork ACEC would be the same acreage as the other action alternatives, but the ACEC and all BLM-managed lands in the subunit would be open to mineral location and leasing. No RCAs would be identified to confer additional protections. Small and large commercial timber harvest would be allowed in the ACEC, but would be predicted to be minimal over the life of the plan. The area would be difficult to access and remote from markets, making timber from the area unmarketable.

Any geophysical exploration for oil and gas in the subunit would be expected to be minimal, same level as predicted in Alternative B and C, and would most likely occur around Circle. Development of locatable minerals would also be predicted to be small. Any applications for locatable minerals could include new access, which could facilitate travel for hunting and increase competition for subsistence resources. Applications for any land use would require a project level analysis to which stipulations to mitigate impacts to subsistence uses would be attached (Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*).

Summer cross-country use of OHV would be the same as in Alternative C. Use of OHV 1,500 pounds curb weight and under would be allowed throughout the area, including the ACEC. Use would not be expected to increase, due to the remoteness of the location and difficulty of summer cross-country travel. Boat and winter cross-county snowmobile travel would be expected to be local and mostly in support of subsistence activities. Some use by recreational aircraft would be expected during state hunting seasons.

Although the least protection to areas most important to fish, wildlife, and vegetative subsistence resources would be afforded through this alternative, limited use and development would be anticipated and impacts would not significantly restrict subsistence uses.

Evaluation of the Availability of Other Lands

Alternative D would manage BLM lands in the subunit to optimize resource use and development, with the fewest restraints on commercial or recreational activity. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents and as conservation system units. Other BLM-managed lands in the state are managed under specific planning documents. Additional BLM lands are managed by current planning documents that allow a mixture of development and conservation following BLM's multiple-use mission, or are currently being evaluated through the planning process. State of Alaska and Native corporation lands cannot be considered in a BLM plan, and under BLM policy other BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence use and resources include the no action and four action alternatives that are presented in Chapters 2 and analyzed in Chapters 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are discussed in Chapter 2.

Findings

Alternative D would not significantly restrict subsistence use by communities in or near the planning area given the management parameters outlined in Chapter 2 of the main document and including the Stipulations and SOPs found in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*. NEPA analysis and evaluation of impacts on subsistence uses would be conducted for each application to further develop site-specific mitigation measures.

J.2.3.5. Upper Black River Alternative E (Proposed RMP)

Alternative E (Proposed RMP) differs from Alternative C (Preferred Alternative in the Draft RMP/EIS) for the following decisions: The Salmon Fork ACEC would be slightly larger (623,000 acres, Map 69); 28 watersheds would be managed as Riparian Conservation Areas (RCAs, Map 11); and ACEC, RCAs, and Black River watershed would be closed to locatable and leasable minerals (1,813,000 acres, Map 43).

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses would be less from decisions in this alternative than for Alternative C because the ACEC, RCAs, and Black River watershed would be closed to both locatable and leasable minerals. Under Alternative E, the Salmon Fork ACEC would be slightly larger than in Alternative C. BLM-managed lands in the rest of the subunit (547,000 acres) would be open to leasable and locatable minerals. The entire subunit would be open to salable minerals and to the year-round use of OHVs.

The remoteness of the area and low mineral potential render it likely that little or no development or increase in use would occur and impacts would be expected to be the same as for Alternative B. No active State mining claims or Federal Plans or Notices currently exist in the subunit. The anticipated number of suction dredging or small or large placer mining operations on BLM-managed lands in the Upper Black River subunit would be zero (Reasonably Foreseeable Development Scenario Section 4.2.1.3.4.).

Analytical assumptions for leasable minerals are in Section 4.2.1.3.3.1. No oil and gas development would occur but limited seismic exploration could occur in the Upper Black River Subunit near Circle.

Applications for any land use, including for exploration, would require a project level analysis to which stipulations would be attached (Appendix A, *Standard Operating Procedures and Fluid Mineral Leasing Stipulations*) and an ANILCA Section 810(a) Evaluation and Finding would be conducted.

Summer cross-country use of OHV 1,500 pounds curb weight and under would be allowed throughout the area, including the ACEC. Use would not be expected to increase due to the remoteness of the location and difficulty of summer cross-country travel over the terrain. Boat and winter cross-county snowmobile travel would be expected to be local and in support of subsistence activities. Some use by recreational aircraft would be expected, mostly during state hunting seasons. Although some areas outside the RCAs and ACEC important to fish, wildlife and vegetative subsistence resources would be open to minerals through this alternative, limited development would be anticipated and impacts to subsistence resources and uses would be negligible.

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative E is to manage BLM lands in the subunit following the BLM mission of multiple use, while at the same time protecting priority habitat and enhancing natural resource values. Lands managed by other federal agencies in the planning area are managed under National Park Service or U.S. Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the state either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State and Native Corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the no action and the four action alternatives that are presented in Chapters 2 and analyzed in Chapters 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are discussed in Chapter 2.

Findings

Alternative E would not significantly restrict subsistence use by communities in or adjacent to the planning area. Most impacts to subsistence resources and uses would be negligible, and any impacts from the limited amount of development allowed to occur would be minimized by the leasing stipulations and SOPs discussed in Appendix A, *Standard Operating Procedures and Fluid Mineral Leasing Stipulations*. Any impacts to subsistence species would be expected to be localized and temporary, and would not be expected to impact resources at the population level. No impacts to access by subsistence users would be expected to occur.

J.2.3.6. Upper Black River Cumulative Case

The goal of the cumulative analysis is to evaluate the incremental impact of the proposed decisions in conjunction with all past, present, and reasonably foreseeable future actions in or near the planning area. The cumulative analysis considers in greatest detail activities that are more certain to happen, and activities that were identified as being of great concern during scoping for the RMP. Actions considered in the cumulative analysis include, but are not limited to, the following (section 4.2.4 Cumulative Impacts):

The Yukon Flats and Arctic National Wildlife Refuges (NWRs) encompass 43 percent of the Upper Black River Subunit (Map 4). The Yukon Flats NWR is managed according to ANILCA (Section 302(9)(B)) to conserve fish and wildlife resources; fulfill international treaty obligations of the United States with respect to fish and wildlife resources; provide the opportunity for continued subsistence uses by local residents; and ensure water quality and quantity within the region. Activities within the refuge include hunting, fishing, recreation use, subsistence harvest, and research and management activities. Although oil and gas exploration has occurred on the refuge, no oil development has occurred. Several acres of Native allotments are scattered throughout the Yukon Flats. The communities of Chalkyitsik and Fort Yukon are within the boundaries of the refuge and both use the area for harvest of subsistence resources. The Yukon Flats NWR provides protection of subsistence resources and use opportunities. Management in the Yukon Flats NWR is expected to continue to be similar to that of the past decade.

The Arctic NWR lays north of BLM-managed lands in the subunit. Its creation began with the designation of the Arctic National Wildlife Range (Arctic Range) in 1960 (Public Land Order 2214). The Arctic Range was established for the “purpose of preserving unique wildlife, wilderness and recreational values.” In 1980, ANILCA (Section 303(2)) established the Arctic NWR, encompassing the lands and waters of the Arctic Range. ANILCA identified four purposes for Arctic NWR. Three of these purposes (ANILCA Section 303(2)(B)(ii),(iii), and (iv)) are identical to the purposes of Yukon Flats NWR, and one (i) is similar: “to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinating the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons, and other migratory birds, and arctic char and grayling.” The ANILCA purposes apply to the entire refuge, and to the extent they are not inconsistent with ANILCA, the lands that were part of the original Arctic Range retain the 1960 establishing purpose. No communities, roads, developments, or trails occur within the Upper Black River Subunit portion of the refuge. The Arctic NWR is considered to be the most primitive and undisturbed conservation area in the Nation. Subsistence use areas for Chalkyitsik and Fort Yukon residents extend into the refuge. Management of the refuge is expected to continue to be similar to the past three decades.

The northern portion of the Yukon-Charley Rivers National Preserve (Preserve) borders BLM-managed and Doyon, Limited, lands in the south end of the subunit and totals 13 percent of the subunit (Map 4). Established under ANILCA, the purpose of the Preserve is to protect and conserve natural and cultural resources to ensure use and enjoyment by future generations. Within the borders of the Preserve are private lands, mining claims and state managed submerged lands. The Coal Creek mining area is accessible by a right-of-way for a state road. No communities are located within the Preserve however the Preserve is within the subsistence use areas for upper Yukon River residents, Eagle, Eagle Village, Fort Yukon, and Circle. The Preserve provides protection of subsistence resources and use opportunities. Management in the Preserve is expected to continue to be similar to that of the previous three decades.

State lands total 5 percent of the subunit. State lands are managed for multiple uses (Map 4). ADF&G is responsible for management of fish and wildlife resources and its management activities apply to all lands in Alaska.

Private lands, including lands conveyed by ANCSA, total 9 percent of the subunit (Map 4). Objectives for village and corporation lands include oil and gas exploration, mineral development, traditional uses, subsistence and conservation. Conveyance of selected lands is ongoing. Approximately 2 percent of lands within the subunit are ANCSA selected. Higher priority lands will be conveyed. ANILCA Title VIII, which provides for a subsistence preference to rural residents, will not apply to conveyed lands. Harvest regulations developed by the Alaska Boards of Fish and Game will apply to these lands.

Oil and gas exploration has been conducted in the subunit, mostly on Yukon Flats NWR where development potential is high. High potential has been identified for parts of the Kandik River. Test results within the Kandik Basin were not favorable and no development has occurred or been proposed. No permits for oil and gas development are in preparation or expected during the life of the plan. Oil and gas development in the area remains speculative and would not be considered as a potential cumulative impact over the next 30 years.

No mining is occurring on federal or state mining claims in the Upper Black River Subunit according to the Alaska Resource Data File. No current or proposed mining activity adjacent to the subunit is within the geographic scope for consideration in the analysis of cumulative impacts. The geographic scope is the Eastern Interior Planning Area (Map 1).

Three Military Operations Areas occur within the subunit. Activity is expected to remain the same or slightly increase. Impacts to wildlife resources important to subsistence could potentially occur. Current practices by the military are to avoid exercises during calving and to implement minimum ceilings to reduced impacts to caribou. Research, monitoring and other land management activities will continue on all lands in the subunit and include access to remote areas by fixed-wing and rotary aircraft, snowmobiles and other OHV. Disturbance from these activities is and would be expected to be localized and temporary.

Climate change will benefit some subsistence resources and negatively affect others. Changes in species distribution and vegetative communities in subarctic areas are predicted to occur by 2040. Frequency and severity of wildland fire in Interior Alaska are predicted to increase and result in shifts to deciduous and shrub-dominated landscapes, which may benefit moose and some furbearers but not caribou. Predicted increases in water temperatures would alter chemical and biotic conditions to the detriment of subsistence fish diversity and abundance. Increases in soil temperatures would result in drying of lakes and ponds. Non-native invasive species (invasive species) can tolerate marginal and wider ranges of environmental conditions than native species. Longer frost-free seasons, drying of lakes and ponds, increases in wildland fire frequency and severity favor pioneering invasive species. BLM-authorized activities that would be allowed under the Eastern Interior RMP could result in removal of vegetation that insulates permafrost. In combination with climate change features, melting of permafrost could be accelerated from actions that remove vegetative cover. However, little change in uses on the BLM-managed lands in the Upper Black River subunit would be expected. Any permitted activities could be permitted would analyze the cumulative effects of the action, including climate change.

Lands managed by BLM in the Upper Black River are surrounded by conservation units and corporation lands. Past, present or reasonably foreseeable future actions by adjacent land managers and uses would be consistent with protection of subsistence uses in the subunit.

Evaluation of the Effects of Use, Occupancy, or Disposition

According to the fish and aquatic resources, vegetative communities, wildlife resources and subsistence analysis in Chapter 4 of the Eastern Interior RMP/EIS, the combination of ongoing leasable and locatable mineral development occurring on state, federal and private lands in the subunit and future development projected for the subunit, would not have cumulative impacts on these resources in the subunit. The privatization of State of Alaska or Native corporation lands could lead to additional development. Depending on the location of development, these impacts could include: short or long-term disturbance to fish and wildlife habitat and migratory routes; disruption of wildlife distribution and movements; stress and disturbance impacts during all seasons of the year; and possible reductions in productivity. If substantial activity occurred within habitat important for subsistence species these impacts could be detectable. Based on the areas of the subunit with high potential leasable and locatable minerals no significant cumulative impacts would be expected to occur.

Evaluation of the Availability of Other Lands

The Cumulative Case, as presented in the planning document, contains information on persistent conditions from past and present actions and reasonably foreseeable future activities that could have an effect on the management decisions being analyzed as part of the RMP/EIS. The purpose of the Cumulative Case is to present known ongoing activity by all entities on all lands near or within the planning area, as well as those activities that have been proposed for the future and would be likely to occur. The Cumulative Case is not an implementable alternative that specifies land uses and management, but instead is a discussion of impacts that could affect the management decisions contained within Alternatives A through E. As such, no other lands are evaluated under the Cumulative Case.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented in Chapters 2 and analyzed in Chapters 4 of the main body of this RMP/EIS, as well as Alternative A. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are discussed in Chapter 2.

Findings

The cumulative case, as presented in this analysis, is not expected to result in a reasonably foreseeable or significant restriction of subsistence resources or uses for rural communities within the planning area.

J.2.4. Evaluation and Finding for White Mountains Subunit

J.2.4.1. White Mountains Alternative A

Selection of Alternative A would result in continued management of the White Mountains Subunit as specified in the 1986 White Mountains National Recreation Area Resource Management Plan (Plan). Valid decisions contained in the Plan would be implemented if not already completed. Direction contained in existing laws, regulation and policy would also continue to be implemented, sometimes superseding provisions in the Plan. The current levels, methods and mix of multiple use management of public land in the planning area would continue, and resource values would receive attention at present levels. In general, most activities would be analyzed at the project level and few uses would be limited or excluded as long as they were consistent with state and federal laws. Wildland fire would be managed consistent with the Alaska Land Use Plan Amendment for Wildland Fire and Fuels Management (BLM 2004b, 2005c).

Evaluation of the Effects of Use, Occupancy, or Disposition

Under Alternative A, the primary impacts to subsistence would be associated with continuation of the current management of Recreation and Off Highway Vehicle (OHV) use as described in the Plan.

Management of resources, including water, cultural and paleontological, fish, wildlife, and vegetation, and of resource uses, including mining and lands activities, requires inventory and monitoring of conditions and populations. Field site visits for compliance examinations are also required. Activities that support data collection may displace subsistence resources from traditional harvest areas. Disturbance from the use of aircraft and OHV during management surveys will be temporary and localized and will not affect any fish, wildlife or vegetative resources at the population level. Inventory and monitoring efforts will benefit subsistence resources by providing valuable data on distribution and population parameters.

Under Alternative A BLM-managed lands in the subunit would be withdrawn from mineral leasing and entry. Mining is limited to existing valid claims, which are primarily in the Livengood area.

Fish, wildlife and vegetative resources in the White Mountains Subunit have been impacted by past placer mining activity in the White Mountains National Recreation Area (NRA). No mining currently occurs or will occur within the NRA under any of the alternatives. Although the subunit is closed to mineral location and entry under Alternative A, 3500 acres of valid existing claims continue to be worked on BLM-managed lands around Livengood. Several claims are also actively mined on adjacent state-managed lands.

Beaver Creek contains the highest value fishery resources in the subunit, aside from the Yukon River. In addition to the White Mountains NRA being closed to locatable minerals in all alternatives and leasable minerals under Alternatives A through C, stream buffers within one-half mile of the banks of Beaver Creek WSR would be withdrawn from locatable minerals under ANILCA, which applies for all alternatives (sections 2.6.3.8 and 2.10.1.2.6 Withdrawals). Given the closure to locatable minerals on BLM-managed lands in the majority of the subunit, impacts to fish and aquatic habitats would be expected to be minimal under the no action and action alternatives. Preserving riparian and stream bank vegetation largely mitigates impacts from placer mining to aquatic systems and is recommended as a standard stipulation for mining operations on all streams.

Under Alternative A, the greatest impact to subsistence resources and uses would result from continuing current management standards of OHV and recreational use in the White Mountains Subunit. Cross-country summer travel by OHV 1,500 GVWR and under would generally be allowed in about 40 percent of the White Mountains NRA and on other BLM-managed lands in the subunit (Map 48). The Beaver Creek WSR Corridor and Primitive area would be closed to summer OHV use and the Research Natural Areas (RNA) would be closed to both summer and winter OHV use. Cross-country summer use in the Semi-Primitive motorized area has resulted in a network of trails. Unmanaged trail proliferation would continue under Alternative A.

With limited restrictions on OHV use and no established limits on visitor use, impacts to subsistence resources and uses could occur. Recreation and OHV use is predicted to continue increasing with population growth in the state and as OHV technology continues to advance. Cross-country access could increases participation in harvest of wildlife resources by all users and could lead to direct and indirect impacts to subsistence uses. Relief for subsistence users would be through the proposals to the Alaska Board of Game and Federal Subsistence Board.

During scoping for the plan no concerns specific to subsistence resources or uses in the White Mountains Subunit were raised, although general comments are common to all subunits.

A small harvest from the White Mountains caribou herd occurs annually. Harvest ticket and registration permit requests and returns documented that the major participation in harvest of caribou in the subunit is by residents from non-rural areas. Participation in other subsistence activities on BLM-managed lands in the subunit is also minimal based on harvest ticket returns and technical reports documenting use areas of communities in and adjacent to the subunit.

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative A would be to continue the current management of BLM-managed lands in the subunit under the 1986 White Mountains RMP. Other federal public lands in the subunit are managed under U.S. Fish and Wildlife Service (Yukon Flats NWR) planning documents. Other BLM lands in the state either already have land use planning documents in place, or are being addressed by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative A would not significantly restrict subsistence use by communities in and adjacent to the planning area, as impacts to subsistence resources would be minimal. Under this alternative the closure of locatable and leasable minerals would be retained, prohibiting new mineral activities on BLM-managed lands. The current levels, methods, and mix of multiple uses would continue. Impacts to subsistence species would be expected to be localized and would not be expected to impact resources at the population level. No impacts to access by subsistence users would be anticipated.

J.2.4.2. White Mountains Alternative B

Alternative B emphasizes active measures to protect and enhance resource values. As in all alternatives, the White Mountains NRA remains closed to mineral entry. Valid existing mining claims occur in the Livengood area and will continue to be mined and developed. The White Mountains Area of Critical Environmental Concern (ACEC) and Special Recreation Management Areas (SRMA) would be identified, and specific measures would be proposed to protect or enhance values within these areas. One eligible river, Fossil Creek (scenic), would be recommended suitable for designation under the Wild and Scenic River Act. Limited areas would be proposed for Off Highway Vehicles (OHV) to protect habitat, soil and vegetation resources.

Evaluation of the Effects of Use, Occupancy, or Disposition

The analysis of effects from Alternative B concludes that impacts as a result of management actions or designations within the planning area will not result in significant reductions in subsistence resources or uses. Many of the proposed actions serve to positively impact subsistence in that management would emphasize habitat and resource protection. While some development activity could occur under this alternative, areas of priority habitat would be protected by special designation, and by the stipulations and SOPs as presented in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*. Actions such as the creation of new SRMAs, ACECs, and/or the designation of WSR segments, do not limit or impose unreasonable restriction on subsistence use as defined by ANILCA Title VIII.

No oil and gas or locatable mineral development will be allowed in the White Mountains NRA. Development of salable minerals would be allowed in the Middlecountry and Frontcountry RMZs. Development would be concentrated near projects and highways and is not expected to impact subsistence resources or uses.

The White Mountains NRA, Beaver Creek WSR Corridor and access into the NRA would be designated as a special recreation management area (SRMA). The White Mountains ACEC (589,000 acres), which is within the SRMA, would be created to protect current and historic calving and postcalving habitat for the White Mountains caribou and Dall sheep habitat. The entire SRMA would remain closed to entry, location, and leasing of minerals.

No summer cross-country use would be allowed in the White Mountains NRA. Only a portion of the SRMA would be open to summer motorized use on designated trails. Future trail development would be compatible with the purpose of NRA.

No OHV use would be allowed in the RNAs. Winter use of snowmobiles would be allowed in the White Mountains Spine Primitive and all other RMZs and would allow cross-country winter use of snowmobiles 1,500 pounds and under curb weight. Permits would be required for all other OHV use. These prescriptions will limit impacts to subsistence resources and uses.

BLM-managed lands around Livengood would be managed as an undesignated recreation area where winter and summer cross-country use of OHV would generally be allowed. Vehicles weighing 10,000 pounds and under curb weight would be allowed but restricted to existing roads only.

The ACEC, RNA and WSR would be right-of-way avoidance areas. One transportation corridor would be retained in the Nome Creek valley. Both actions would benefit subsistence resources and uses by keeping any new roads or other rights-of-way consolidated in as few corridors as possible.

Areas important to fish and wildlife subsistence resources would be largely protected because they would be within the Beaver Creek WSR Corridor, ACEC, RCAs and SRMA.

Evaluation of the Availability of Other Lands

Alternative B would manage BLM public lands in the White Mountains Subunit in order to optimize conservation. Lands managed by other federal agencies in the planning area are managed under U.S. Fish and Wildlife Service planning documents and are considered conservation system units. Other BLM-managed lands in the state either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State and Native corporation lands cannot be considered in a BLM plan and BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Analysis of effects from Alternative B concludes that impact as a result of management actions or designations within the planning area will not result in significant reductions in subsistence resources or uses by residents in or adjacent to the subunit. Most impacts to subsistence resources would be beneficial, and any impacts by way of the limited amount of development allowed to occur under this alternative would be minimized by leasing stipulations and SOPs (see Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations* and Chapter 2).

J.2.4.3. White Mountains Alternative C

Alternative C emphasizes a moderate level of protection, use, and enhancement of resources and services. Constraints to protect resources would be implemented, but would be less restrictive than under Alternative B. This alternative would designate no ACEC; however the SRMA would remain the same (the entire White Mountains NRA and Beaver Creek WSR Corridor). The seven Recreation Management Zones (RMZs) would change in area with a shift away from Semi-Primitive RMZs and more toward Backcountry and Middlecountry RMZs. The shift to a larger Middlecountry would result in more area available for summer OHV use, albeit on designated trails. Limits on travel would change to more lenient use of OHV in this RMZ to include off-trail game retrieval. No rivers would be recommended as suitable for designation under the WSRA. The SRMA would be closed to leasable and locatable minerals. All but the Beaver Creek WSR Corridor would be open to salable minerals but impacts would be minimal.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses from the increased level of use allowed by this alternative would be similar in nature to Alternative B, except under Alternative C more acres would be available for salable mineral development and use of OHV 1,500 pounds curb weight and less on designated trails expands to allow off-trail retrieval of game in the Middlecountry RMZ.

Placer mining activity under Alternative C is estimated to remain the same as Alternative A with no impacts to the high-value fishery resources supported by the Beaver Creek or to wildlife and vegetative resources. Development of valid existing claims near Livengood would be expected to continue to occur with little or no impacts to subsistence.

Under Alternative C, no White Mountains ACEC would be created. Caribou calving and postcalving habitat and Dall sheep habitat, which is within the SRMA, would be protected by other prescription. Entry, location and leasing of minerals would be closed in the SRMA (except salable mineral disposal could be authorized in all but the WSR). Most of the highest value wildlife habitat is within the Backcounty and Semi-Primitive RMZs where cross-country winter use of snowmobiles 1,500 pounds curb weight and less would be allowed but no other OHV use would be allowed, except with a permit or approved Plan of Operations.

In the Livengood area cross-country summer and winter use of OHV 1,500 pounds curb weight and less would be allowed (see sections 2.10.2.1.2.6 and 2.10.2.2.2.6 Travel Management for limitations). Vehicles of 10,000 pounds curb weight and less would be allowed on existing roads only. Permits or approved Plan of Operations would be required for any other OHV use.

Further trail development could be allowed if compatible with the decisions for this alternative and subsistence uses. Off-route game retrieval could increase participation by all hunters. The potential increase in impacts to subsistence resources and uses from travel management prescriptions in this alternative would be minor, particularly compared with the No Action Alternative (current situation) and Alternative D.

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative C is to manage BLM lands in the subunit following the BLM mission of multiple use, while at the same time protecting priority habitat and enhancing natural resource values. Lands managed by other federal agencies in the planning area are managed under U.S. Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the state either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State of Alaska and Native corporation lands cannot be considered in a BLM plan and BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative C would not significantly restrict subsistence use by communities in or adjacent to the planning area. Most impacts to subsistence resources and uses would be minor, and any impacts from the development allowed to occur would be minimized by the leasing stipulations and SOPs discussed in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations.* Any impacts to subsistence resources would be expected to be localized and temporary, and would not be expected to impact resources at the population level. SOPs and stipulations to protect riparian and aquatic habitats would be necessary to mitigate impacts from the few allowed uses, especially along streams where buffers would not apply. No impacts to access by subsistence users would be expected to occur.

Little or no use of wildlife resources by rural communities has been documented by harvest reports or other documentation, such as technical reports on subsistence use by local communities. Forty-five rural residents participated in harvest of the WMCH during regulatory years 1999–2009 (total participation by all residents was 1468). Eighteen rural communities statewide are represented in that statistic. Over the 11 year period, of the 186 caribou harvested, 5 were taken by rural residents (0.45 caribou/year) (Seaton, Pers. Comm. 2009). Participation and harvest success data of rural residents for moose in the subunit are not available but would be expected to be similar.

Nominal competition for subsistence resources would be expected to occur if large numbers of hunters would be attracted to areas where off-trail game retrieval would be allowed. Participation by rural residents would be expected to remain about the same over the life of the plan.

J.2.4.4. White Mountains Alternative D

Alternative D emphasizes active management to facilitate resource development on BLM lands in the subunit. All ANCSA 17(d)(1) withdrawals would be revoked on lands retained in long-term federal ownership. The SRMA would be closed to locatable minerals (Map 36). Approximately 55 percent of these lands would be closed to mineral leasing (Map 37). Travel and trail restrictions would be minimized. A smaller ACEC, focused on habitat protection management would be identified.

Evaluation of the Effects of Use, Occupancy, or Disposition

Impacts to subsistence resources and uses from the increased level of development and use allowed by this alternative would be similar to the other action alternatives. Higher percentages of land would be available for leasable minerals and limits on OHV and recreation would be less.

Under Alternative D the entire subunit would remain closed to locatable mineral entry, subject to valid existing rights. Areas open to leasable minerals include portions of the current White Mountains caribou calving, postcalving and winter range, moose habitat and Dall sheep movement corridors and habitat. An area of high potential oil and gas that includes most of the Yukon Flats National Wildlife Refuge dips to Victoria Creek in the northern most part of the White Mountains NRA. The rest of the area has low or no oil and gas potential. Impacts from development of leasable minerals include direct disturbance to wildlife on priority habitats, fragmentation of habitat through important movement corridors, and long-term impacts to streams and riparian habitats from placer mining (sections 4.7.1.2 and 4.7.1.7 Impacts Specific to the White Mountains Subunit, Fish, Wildlife). Exploration may be proposed in the White Mountains Subunit but is not expected to occur. No oil and gas development would be expected over the life of the plan.

RNAs carry the only Primitive RMZ designations and would be closed to OHV use without a permit. Semi-Primitive and Backcountry RMZs would be open to winter use of snowmobiles 1,500 pounds curb weight and under. All other OHV use would require a permit. Summer cross-country use would be allowed within the White Mountains Foothills Middlecountry RMZ. Middlecountry would expand to include most of Victoria Creek and the Ray Creek drainage and would allow summer cross-country travel by OHV 50” wide and less and 1,500 pounds curb weight and under. Impacts to Dall sheep, caribou, moose and other wildlife from cross-country summer use would potentially occur in these areas. Travel in the Nome Creek Frontcountry RMZ would continue to be limited to designated trails except that off trail retrieval of legally harvested game would be allowed. The Wickersham Dome-Blixt Frontcountry RMZ generally allows cross-country summer OHV use. No impacts would be expected from the Frontcountry prescriptions.

BLM-managed lands around Livengood would be managed as an undesignated recreation area where winter and summer cross-country use of OHV would generally be allowed. Vehicles weighing 10,000 pounds curb weight and less would be allowed but restricted to existing roads only.

Use of OHV under this alternative would have the greatest potential for impacts on subsistence resources and uses. In addition to areas currently open to cross-country summer OHV use under Alternative A, Victoria Creek would be open to cross-country summer OHV use. Important winter range for the WMCH and priority moose habitat occur in the Victoria Creek area. At current levels of subsistence use in the White Mountains Subunit however, impacts to subsistence resources and uses are not expected to be significant.

Evaluation of the Availability of Other Lands

Alternative D would manage BLM lands in the subunit to optimize resource use and development, with the fewest restraints of all alternatives on commercial activity (leasable minerals and forest products) and the fewest limitations on travel management and recreation activity of the action alternatives. Lands managed by other federal agencies in the subunit are managed under U.S. Fish and Wildlife Service planning documents and as conservation system units. Other BLM lands in the state are managed by current planning documents that allow a mixture of development and conservation following BLM's multiple-use mission, or are currently being evaluated by the planning process. State of Alaska and Native corporation lands cannot be considered in a BLM plan and BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence use and resources include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative D would not restrict subsistence use by communities in or near the planning area. Any impact from responses to potential locatable mineral development and cross-county summer use of OHV would not be significant. Management parameters outlined in Chapter 2 of the main document and the leasing stipulations and SOPs found in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations* would mitigate the impacts. Should the amount of potential locatable mineral development, or other land uses, expand beyond expected activity, this finding may need to be revised to take into account impacts to the WMCH and other subsistence resources and uses that cannot be mitigated.

J.2.4.5. White Mountains Alternative E (Proposed RMP)

Differences between the Alternative E and Alternative C (Preferred Alternative in the Draft RMP/EIS) include the addition of one riparian conservation area (total 14); allowing fluid and solid leasable mineral development on 4,000 acres and maintaining the White Mountains NRA as closed; changing RNAs from closed to motorized vehicles to limited to snowmobile use; lifting prohibition on airboats and hovercraft; and deferral of the Travel Management Plans with adoption of the no action alternative (Alternative A) as interim management.

Evaluation of the Effects of Use, Occupancy, or Disposition

Placer mining activity under Alternative E would remain the same as Alternative A with no impacts to the high-value fishery resources supported by the Beaver Creek or to crucial and priority wildlife habitat and vegetative resources. Development of valid existing claims near Livengood would be expected to continue to occur with little or no impacts to subsistence.

Under Alternative E, the Wildlife Conservation Area would be renamed Crucial Caribou and Dall Sheep Habitat. The area would be the same size as the Wildlife Conservation Area in Alternative C. Caribou calving and post-calving and Dall sheep habitat would be protected by limiting OHV use to no summer use, except with a permit or approved Plan of Operations. Summer OHV use would not be allowed within the Primitive, Semi-Primitive, Backcountry, and Wickersham Dome-Blixt RMZs.

In the Livengood area cross-country summer and winter use of OHV 1,500 pounds curb weight and less would be allowed (see sections 2.10.2.1.2.6 and 2.8.2.2.2.6 Travel Management for limitations). Vehicles of 10,000 pounds curb weight and less would be allowed on existing roads only. Permits or approved Plan of Operations would be required for this or any other OHV use.

Further trail development or changes to travel management could be allowed by the Travel Management Plan, which would be completed within five years of signing the White Mountains Record of Decision. Analysis specific to impacts from the Travel Management Plan and an ANILCA Section 810(a) Evaluation and Finding will be conducted.

Evaluation of the Availability of Other Lands

The purpose sought to be achieved under Alternative E is to manage BLM lands in the subunit following the BLM mission of multiple use, while at the same time protecting priority habitat and enhancing natural resource values. Lands managed by other federal agencies in the planning area are managed under U.S. Fish and Wildlife Service planning documents, and are considered conservation system units. Other BLM lands in the state either already have land use planning documents in place that specify the amounts and types of activities that can or cannot occur, or are currently being evaluated by separate planning processes. State of Alaska and Native corporation lands cannot be considered in a BLM plan and BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS. These alternatives were created to represent a wide-range of potential activities that could occur on BLM lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative E would not significantly restrict subsistence use by communities in or adjacent to the planning area. Most impacts to subsistence resources and uses would be minor, and any impacts from the development allowed to occur would be minimized by the leasing stipulations and SOPs discussed in Appendix A, *Required Operating Procedures and Fluid Mineral Leasing Stipulations*. Any impacts to subsistence resources would be expected to be localized and temporary, and would not be expected to impact resources at the population level. SOPs and stipulations to protect riparian and aquatic habitats would be applied to mitigate impacts from the few allowed uses, especially along streams where buffers would not apply. No impacts to access by subsistence users would be expected to occur.

Little or no use of wildlife resources by rural communities has been documented by harvest reports or other documentation, such as technical reports on subsistence use by local communities. Forty-five rural residents participated in harvest of the WMCH during regulatory years 1999–2009 (total participation by all residents equaled 1468,). Eighteen rural communities statewide are represented in that statistic. Over the 11 year period, of the 186 caribou harvested, 5 were taken by rural residents (0.45 caribou/year) (Seaton, Pers. Comm. 2009). Participation and harvest success data of rural residents for moose in the subunit are not easily determined but would be expected to be similar. Specific data on participation is discussed in Chapter 3 Section 3.5.3.2. Subsistence Harvest Levels and 3.5.3.3.1. Subsistence Use Areas.

As the FCH continues to expand its range into the north Steese National Conservation Area and White Mountains NRA participation in harvest by rural residents from across the state would increase. Participation by federally qualified subsistence users and non-rural hunters could also increase as opportunities to harvest wildlife become more restrictive in other parts of the state.

J.2.4.6. White Mountains Cumulative Case

The goal of the cumulative analysis is to evaluate the incremental impact of the current action in conjunction with all past, present, and reasonably foreseeable future actions in or near the planning area. The cumulative analysis considers in greatest detail activities that are more certain to happen, and activities that were identified as being of great concern during scoping. Actions considered in the cumulative analysis include, but are not limited to the following (refer to section 4.2.4 Cumulative Effects):

Development of minerals will occur on state and private lands in the subunit. Effects will be similar to those described for activities on BLM lands, except that the level of activity is expected to be higher due to higher mineral potential, particularly on state lands adjacent to BLM-managed lands.

Military aircraft use is allowed in Military Operation Areas (MOAs) over much of the White Mountains Subunit and is likely to increase. Impacts to wildlife resources important to subsistence could potentially occur. Current practices by the military to avoid exercises during caribou calving and implementing minimum ceilings have reduced but not eliminated impacts to caribou.

Research, monitoring and other land management activities will continue on all lands in the subunit and include access to remote areas by fixed and rotary wing aircraft, snowmobiles and other OHVs. Disturbance from these activities is localized and temporary.

Climate change will benefit some subsistence resources and negatively affect others. Changes in species distribution and vegetation communities in subarctic areas are predicted to occur by 2040. Frequency and severity of natural wildland fire in Interior Alaska are predicted to increase and result in shifts to deciduous and shrub-dominated landscapes, which may benefit moose and some furbearers but not caribou. Predicted increases in water temperatures would alter chemical and biotic conditions to the detriment of subsistence fish diversity and abundance. Increases in soil temperatures would result in drying of lakes and ponds.

The population of Fairbanks and the surrounding area is predicted to increase by about 10 percent from the 2000 census to the 2020 census. Development of a gas line or other projects may boost the population beyond the estimate. Demands for recreation and subsistence resources are predicted to increase between 10 and 15 percent over the next 20 years. With the management emphasis on recreation in the White Mountains Subunit, increased use would be expected in this area.

Conveyance of remaining selected lands to the state and Native corporations is ongoing. Planning area wide, about 1.1 million acres are in selection by Native corporations (ANCSA 1971) and 1.4 million acres are in selection by the State of Alaska. Fish and wildlife management of harvest would be predicated on state regulations. Based on joint state/federal harvest management of WMCH and FCH in the subunit, no impacts to subsistence uses would be expected to occur. Impacts to use of fish and other wildlife could occur if state regulations are more restrictive than federal regulations on those lands.

Alternative B would best protect subsistence resources in concert with actions occurring adjacent to BLM-managed lands in the White Mountains Subunit because wildlife habitat would be protected from cross-country summer OHV use in areas open to summer use. Alternative C would somewhat increase impacts to subsistence resources and uses collectively with actions by adjacent land managers because more area would be open to summer use, however by designated trails. Alternative E would be similar to the current management, which would allow cross-country summer OHV use. Alternative A-C and E would be closed to locatable and leasable minerals. Alternative D would potentially have the greatest impacts on subsistence resources and uses when added to decisions by adjacent land managers because parts of the White Mountains NRA would be open to leasable and locatable minerals.

Evaluation of the Effects of Use, Occupancy, or Disposition

According to the fish and wildlife analysis in Chapter 4 of the Eastern Interior RMP/EIS, the combination of ongoing locatable mineral development occurring on state, federal and private lands in the subunit combined with future uses and development projected for the subunit would have few cumulative impacts on subsistence resources within the White Mountains Subunit. The privatization of State of Alaska or Native corporation lands could lead to additional development but is not expected to have cumulative impacts within the subunit.

Evaluation of the Availability of Other Lands

The Cumulative Case, as presented in the planning document, contains information on reasonably foreseeable activities that could have an effect on the management decisions being analyzed as part of the RMP/EIS. The purpose of the Cumulative Case is to present known ongoing activity by all entities on all lands near or within the planning area, as well as those activities that have been proposed for the future and are likely to occur. The Cumulative Case is not an implementable alternative that specifies land uses and management, and instead is a discussion of impacts that could affect the management decisions contained within Alternatives A–D. As such, no other lands are evaluated under the Cumulative Case.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate other uses of public lands otherwise needed for subsistence include the four action alternatives that are presented and analyzed in Chapters 2 and 4 of the main body of this RMP/EIS, as well as Alternative A. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

The cumulative case, as presented in this analysis, would not result in any reasonably foreseeable or significant restriction of subsistence use for rural communities within the planning area.

J.3. Notice and Hearings

The ANILCA Sec. 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the public lands which would significantly restrict subsistence uses shall be effected” until the federal agency gives the required notice and holds a hearing in accordance with ANILCA Sec. 810(a)(1) and (2). The BLM will provide notice in the *Federal Register* that it has made positive findings pursuant to ANILCA Sec. 810 that the following alternatives or the cumulative case presented in the Proposed RMP/Final EIS meets the “may significantly restrict” threshold: Fortymile Subunit, Alternative D in combination with the Cumulative Case; Steese Subunit, Alternative D in combination with the Cumulative Case. As a result, public hearings will be held in the potentially affected communities. Notice of these hearings will also be provided by way of the local media, including the newspaper and the local radio station, with coverage to many villages in Eastern Interior Alaska.

J.4. Subsistence Determinations Under ANILCA Section 810

The ANILCA Sec. 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the public lands which would significantly restrict subsistence uses shall be effected” until the federal agency gives the required notice and holds a hearing in accordance with the ANILCA Sec. 810(a)(1) and (2), and makes the three determinations required by the ANILCA Sec. 810(a)(3)(A), (B), and (C). The three determinations that must be made are: 1) that such a significant restriction of subsistence use is necessary, consistent with sound management principles for the utilization of the public lands; 2) that the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other such disposition; and 3) that reasonable steps will be taken to minimize adverse impacts to subsistence uses and resources resulting from such actions [16 U.S.C. Sec. 3120(a)(3)(A), (B), and (C)].

The BLM has found in this subsistence evaluation that Alternative D and the cumulative case in the Steese Subunit and Alternative D combined with the cumulative case in the Fortymile Subunit, which are considered in Draft RMP/EIS, could significantly restrict subsistence uses. Therefore, the BLM undertook the notice and hearing procedures required by the ANILCA Sec. 810 (a)(1) and (2) in conjunction with release of the Draft RMP/EIS in order to solicit public comment from the potentially affected communities and subsistence users. The BLM did not find in the subsistence evaluation that any alternatives considered in the Resource Management Plan for the Upper Black River Subunit or the White Mountains Subunit would significantly restrict subsistence uses.

The Proposed RMP (Alternative E) was found through the ANILCA Sec. 810(a) process to have no significant restriction on subsistence uses nor with the cumulative case. Therefore the determination process as described in ANILCA Sec. 810(a)(3)(A), (B), and (C) would not be required.

Appendix K

BLM Alaska Sensitive Species List

Appendix K. BLM Alaska Sensitive Species List

This appendix includes the BLM Alaska Sensitive Species List (Instruction Memorandum No. AK-2010-18, May 18, 2010). Many species on this list are not known to occur in the Eastern Interior Planning Area. A list of the species known or likely to occur in the planning area is included in Chapter 3 of this document.

Table K.1. BLM Alaska 2010 Sensitive Species List

Category	Scientific Name	Common Name
Birds	*Brachyramphus brevirostris*	Kittlitz's Murrelet
	Gavia adamsii	Yellow-billed Loon
	Chen canagica	Emperor Goose
	Calidris canutus	Red Knot
	Numenius tahitiensis	Bristle-thighed Curlew
	Brachyramphus marmoratus	Marbled Murrelet
	Plectrophenax hyperboreus	McKay's Bunting
	Branta canadensis occidentalis	Dusky Canada Goose
	Cygnus buccinator	Trumpeter Swan
	Contopus cooperi	Olive-sided Flycatcher
	Euphagus carolinus	Rusty Blackbird
	Calidris ptilocnemis tschuktschor	Bering Sea Rock Sandpiper
	Aquila chrysaetos	Golden Eagle
	Asio flammeus	Short-eared Owl
	Dendroica striata	Blackpoll Warbler
Fish	*Lampetra alaskense*	Alaskan Brook Lamprey
	Salvelinus alpinus	Arctic Char (Kigluaik Mtns.)
Insects	*Rhithrogena ingalik*	Alaska Endemic mayfly
	Acentrella feropagus	a mayfly
	Alaskaperla ovibovis	Alaska Sallfly
Mammals	*Lepus othus*	Alaskan hare
	Spermophilus parryii osgoodi	Osgood's arctic ground squirrel
	Mustela americana kenaiensis	Kenai marten
	Sorex yukonicus	Alaskan Tiny Shrew
Plants	*Antennaria densifolia*	
	Arnica lonchophylla	Northern Arnica
	Artemisia globularia ssp. lutea	
	Artemisia laciniata	Siberian Wormwood
	Artemisia senjavinensis	Arctic Sage
	Aster pygmaeus (Eurybia pygmaea)	Pygmy aster
	Botrychium ascendens	moonwort
	Carex adelostoma	Circumpolar sedge
	Claytonia arctica	Arctic Springbeauty
	Claytonia ogilviensis	Ogilvie Mtns. spring beauty
	Cryptantha shackletteana	Shacklettes' Catseye
	Douglasia alaskana	Alaska Rock-jasmine
	Douglasia arctica	Mackenzie River Douglasia
	Douglasia beringensis	Artic dwarf primerose
	Draba micropetala	Alpine Whitlow-grass
	Draba murrayi	Murray's Whitlow-grass

Category	Scientific Name	Common Name
Plants	*Draba ogilviensis*	Ogilvie Mountains Whitlow-grass
	Draba pauciflora	Adam's Whitlow-grass
	Erigeron muirii	Muir's Fleabane
	Erigeron yukonensis	Yukon Fleabane
	Eriogonum flavum var. aquilinum	Yukon Wild-buckwheat
	Erysimum asperum var. angustatum	a Wallflower
	Gentianopsis detonsa ssp.detonsa	Sheared Gentian
	Koeleria asiatica	Oriental Junegrass
	Lesquerella calderi	Calder's Bladder-pod
	Mertensia drummondii	Drummond's Bluebell
	Montia bostockii	Bostock's Miner's-lettuce
	Oxytropis arctica var. barnebyana	Barneby's Locoweed
	Oxytropis huddelsonii	
	Oxytropis kobukensis	Kobuk Locoweed
	Papaver alboroseum	Pale Poppy
	Papaver gorodkovii	
	Papaver walpolei	Walpole Poppy
	Parrya nauruaq	
	Pedicularis hirsuta	
	Phacelia mollis	Macbride Phacelia
	Pleuropogon sabinei	Sabine-grass
	Poa hartzii ssp. alaskana	
	Poa porsildii	
	Potentilla stipularis	Circumpolar Cinquefoil
	Primula tschuktschorum	Chukchi Primrose
	Puccinellia wrightii	
	Ranunculus chamissonis	
	Ranunculus glacialis var. 1	
	Ranunculus turneri	Turner's Butter-cup
	Rumex graminifolius	
	Rumex krausei	Cape Krause Sorrel
	Smelowskia johnsonii	
	Smelowskia pyriformis	
	Trisetum sibiricum ssp. litorale	Siberian False-oats

Appendix L

Public Comment and Response

Appendix L. Public Comments and Response

L.1. Introduction

We divided this chapter into four main sections. Section L.1, Introduction, provides an overview of the comment response process. Section L.2, Summary of General Concerns, summarizes some nonsubstantive comments. Section L.3, Consultation and Cooperating Agencies, summarizes comments from tribes and cooperating agencies. Section L.4, Issue Topics and Responses, contains summary statements and responses for all topics. We divided each section into sub-topic headings that include comment numbers, a summary statement, and the BLM's response to the summary statement.

The Proposed RMP is the same as Alternative E. This appendix refers to Alternative E as the Proposed RMP, per 43 CFR 1610.4-8.

The BLM published the Draft RMP/EIS and initiated a 160-day public comment period to receive comments on the Draft. The agency then later extended this comment period indefinitely, pending publication of a Supplemental EIS. The BLM released its Supplement to the Draft EIS on Jan. 11, 2013, for 90-day public comment period that closed April 11, 2013, for both the Draft RMP/EIS and the Supplement. Altogether, the comment period on the Draft RMP/EIS totaled 411 days.

The BLM received written comments on the Draft RMP/EIS and Supplement by mail, email, online, and at public meetings. Comments covered a wide spectrum of thoughts, opinions, ideas, and concerns. Recognizing that commenters invested considerable time and effort to submit their comments on the Draft RMP/EIS, the BLM developed its comment analysis methodology to ensure full tracking and consideration of all comments as directed by NEPA regulations. NEPA requires that the BLM identify and formally respond to all substantive public comments submitted to the BLM.

The BLM assigns a unique identification number to each comment letter, and then logs the comment into CommentWorks. CommentWorks is a Web-based database that the BLM uses to organize, categorize, and respond to the comments. Codes for each comment letter identified appropriate comment categories based on the comment's content and retained the link to the commenter. The comment categories generally follow the sections presented in the Draft RMP/EIS, although some categories relate to the planning process or editorial concerns.

The BLM grouped similar comments under a topic heading and drafted a statement summarizing the ideas contained in these comments. The response indicates whether the commenters' points resulted in a change in the document or not. As a result of public comments, the BLM made changes to the Draft RMP/EIS that reflect the consideration given to public comments. The Executive Summary, Summary of Changes from Draft to Final contains the summary of major changes between the Draft RMP/EIS and the Proposed RMP/Final EIS.

Although the BLM diligently considered each comment letter, the comment analysis process involves determining whether a comment is substantive or nonsubstantive in nature. To perform this analysis, the BLM relies on the CEQ's regulations to determine what constitutes a substantive comment. A substantive comment does one or more of the following:

- Questions, with a reasonable basis, the accuracy of the information and/or analysis in the EIS
- Presents reasonable alternatives other than those presented in the Draft EIS that meet the purpose and need of the proposed action and addresses significant issues
- Questions, with a reasonable basis, the merits of an alternative or alternatives
- Causes changes in or revisions to the proposed action
- Questions, with a reasonable basis, the adequacy of the planning process itself

Additionally, BLM's NEPA handbook identifies the following types of substantive comments:

- Comments on the Adequacy of the Analysis: Comments that express a professional disagreement with the conclusions of the analysis or assert that the analysis is inadequate are substantive in nature, but may or may not lead to changes in the Proposed RMP/Final EIS. Interpretations of analyses should be based on professional expertise. Where there is disagreement within a professional discipline, a careful review of the various interpretations is warranted. In some cases, public comments may necessitate a reevaluation of analytical conclusions. If, after reevaluation, the manager responsible for preparing the EIS (authorized office [AO]) does not think that a change is warranted, the response should provide the rationale for that conclusion.
- Comments That Identify New Impacts, Alternatives, or Mitigation Measures: Public comments on a draft EIS that identify impacts, alternatives, or mitigation measures that were not addressed in the draft are substantive. This type of comment requires the AO to determine whether it warrants further consideration. If it does, the AO must determine whether the new impacts, new alternatives, or new mitigation measures should be analyzed in the Final EIS, a supplement to the Draft EIS, or a completely revised and recirculated Draft EIS.
- Disagreements with Significance Determinations: Comments that directly or indirectly question, with a reasonable basis, determinations regarding the significance or severity of impacts are substantive. A reevaluation of these determinations may be warranted and may lead to changes in the Final EIS. If, after reevaluation, the AO does not think that a change is warranted, the response should provide the rationale for that conclusion.

Although we read, analyzed, and considered comments on the Draft RMP/EIS containing opinions, feelings, and preferences for one element or one alternative over another, and comments of a personal and/or philosophical nature, we did not respond in writing to these comments. It is also important to note that while agency reviewers considered all comments, but they did not count comments as "votes". The NEPA public comment period is not an election or a representative sampling of the population. Therefore, public comments are not appropriate to use as a democratic decision-making tool, or as a scientific sampling mechanism.

We recognize that it can be difficult to write comments that meet the definition of *substantive*. Therefore, section L.2. summarizes some of the opinions, feelings, and preferences in the comment letters.

We have incorporated comments citing editorial changes to the document and maps as appropriate. We also edited and revised the Proposed RMP/Final EIS to fix typos, missing references, definitions, and acronyms, and other clarifications where needed. We have reviewed all maps to fix typos, clarify, and improve content when possible. Additionally, combining multiple maps is reducing the total number of maps in the Proposed RMP/Final EIS.

L.2. Summary of General Concerns

Many of the comments do not require a written response in the EIS because they did not meet the substantive threshold. However, we recognize the validity of these comments and considered them when formulating the Proposed RMP and the analysis of impacts. The sections below provide a summary of general comments and concerns.

The BLM received four form letters on the Draft RMP and two form letters during the public comment period on the Fortymile and Mosquito Flats areas of critical environmental concern (ACECs). As discussed above, multiple identical form letters are considered a single comment. Approximately 2,400 letters expressed general support for protecting lands from development and Alternative B; 9 letters expressed support for multiple use and Alternative D; 9 letters expressed support for increased motorized access and Alternative A; and 20,000 letters expressed support for designation of the Fortymile and Mosquito Flats ACECs.

L.2.1. Climate Change

Many commenters expressed concern about ongoing climate change and its potential effects on resources and subsistence. Others indicated that climate change was not an issue. Some examples are listed below.

- Global warming is adversely affecting fish and wildlife in Interior Alaska and this in turn is impacting local residents who depend on these resources.
- Melting permafrost is affecting lake levels in areas utilized for hunting and gathering.
- Mining and industrial development would increase future greenhouse gas emissions, contributing to climate change. The BLM should minimize increases in these types of activities.
- Climate change will particularly impact Alaska's wilderness areas and management should be conservative until these impacts are better understood.
- Preserving the planning area lands in an undeveloped state will help cut down on the pollution that causes climate change.
- The RMP should not address climate change because it is outside of BLM’s mandate or because is it not happening.

L.2.2. Wildlife and Fisheries Management

Commenters cited various concerns about potential impacts on wildlife and fisheries, such as those listed below.

- Mining may lead to contamination of the Black River leading to negative effects on fish, waterfowl, and furbearers.
- The RMP may lead to increases in hunting guides, lodges, and mining operations in the Upper Black River Subunit with corresponding impacts to fish and wildlife.

- The RMP may have negative effects on crucial wildlife habitat in the Black River, including moose calving.

- Potential impacts of encroachment in the Fortymile Caribou Herd range, including calving grounds.

- The RMP may negatively impact caribou which is of increased importance as a subsistence resource given the decline of Chinook salmon.

- Many commenters expressed concern about the declining Yukon River Chinook salmon stock and potential effects on salmon if mining occurred in tributaries to the Yukon River. Listed below are some examples.

    - "At a time when our Chinook salmon stocks have rapidly declined, and many subsistence needs are thus not met, as well as the real potential to not meet escapement goals into Canada, removing current protections from vast areas such as the Upper Black, Salmon Fork, and Kandik rivers to allow for new mineral entry and transportation routes and development, is the opposite of what BLM should be advocating for."

    - "At a time when our Chinook salmon stocks have rapidly declined, and many subsistence needs are thus not met, as well as the real potential to not meet escapement goals into Canada, removing current protections from vast areas such as the Upper Black, Salmon Fork, and Kandik rivers to allow for new mineral entry and transportation routes and development, is the opposite of what BLM should be advocating for."

L.2.3. Cultural Resources and Subsistence

Commenters expressed the following general concerns relative to cultural resources and subsistence:

- The Gwich'in way of life is dependent upon a clean and undeveloped environment that provides sufficient habitat for subsistence resources. The people's culture and traditions are tied to the land and water.

- The Draanjik River (Black River) is the lifeline for the animals, plants, and humans alike. We depend on this clean and pristine water for our life and our health.

- Mining is hard on the land and affects water quality. That is what we live off of, the water, good water.

- We would like to see our land and rivers in as good condition 100 years from now as they are today; maybe even better if we continue being good stewards of our precious land.

- We need the Black River to stay pure and clean so we can continue to live the way our ancestors lived. The government wants us to make our own living and not to depend on it. How are we supposed to do that if we cannot live off the land and have clean water?

- You can't do things like mining, moving the dirt around, adding extra chemicals, changing the landscape without effecting watersheds. The watershed affects the whole ecosystem. So, you've got damage not only to the fish and water quality, but you also got damage to all the animals that survive on that. Not to mention the plants that use the riparian area, and if it is affecting all those things, it's also affecting the people who use those areas for subsistence.

L.2.4. Minerals Management

At public meetings and during government-to-government consultation, residents of the Yukon Flats and others expressed concerns related to opening the planning area to mining. An often-expressed concern was a fear of contamination of the Black River and tributaries. Alternatively, some segments of the public recommended that the RMP promote mining to increase economic opportunities in the state and to speed up the permitting process.

Examples of comments in support of limiting or excluding mining include:

- Mining could lead to pollution of land and waters, and contamination of subsistence foods. Contamination of subsistence foods may lead to other health effects, such as cancer.
- Impacts from mining are long-term or permanent.
- Impacts of mining in the far north boreal forest are unknown, and allowing mining is an unnecessary risk to fish, waterfowl, animals, the subsistence way of life, and the Gwich'in culture.
- Industrial access into the Washington Creek drainage (Fortymile Subunit) is incompatible with current uses of this area for trapping and subsistence.
- The BLM does not anticipate mining in the Black River area during the life of the plan. What if the BLM is wrong? Once mining claims are established, it is too late.
- Mining will not provide any jobs or benefits to Alaska Natives.
- If mining occurs, it will not be possible to contain the waste over the long-term. Eventually, it will get into the water and come downstream.
- Companies already have enough leases. Let them develop the ones they have before you give out more.
- Mining companies do not always follow through and clean up as they are required to do.
- Mining regulations are not sufficient to protect the land and the government has limited control over what miners do.
- The BLM should be conservative and retain mining withdrawals until there is adequate research and consideration of traditional ecological knowledge to ensure that important resources will be conserved.

Examples of comments in support of expanding opportunities for mining are:

- The RMP should be flexible and allow for inventory and development of mineral resources to support future job development and associated economic benefits.
- The BLM is not meeting its mandate for multiple uses. Many of these lands have been off-limits to mineral development for more than four decades in an area where mining, recreation, and wildlife have coexisted for more than a century. The BLM manages 72 million surface acres (and 220 million acres of subsurface mineral estate) in Alaska; there are 54 million acres of National Parks, and 22 million acres of National Forest. Alaska has over two-thirds of the nation's park lands. It is imperative that the BLM manage its lands as multiple-use and

consider development options, not wilderness closures and withdrawals, to create some balance with what has already been set aside.

- Alaska's mining industry faces significant regulatory impacts from a number of new, pending, or expected federal rules and regulations. Stronger federal mining regulations - in recent years are sufficient to protect the resources without withdrawing the lands.
- The RMP would impose a large number of standard operating procedures for mining. This is a large burden for small mining companies.
- The ANCSA withdrawals in the planning area are outdated and have long since served their purpose. The completion of Alaska Native land selections and the passage of the Alaska National Interest Lands Conservation Act (ANILCA) resolved disposition of the conservation selections. The BLM should revoke these outdated withdrawals.
- The RMP is too restrictive in limiting mineral assessment and exploration, and arbitrarily restricts the possibility of discovering economic deposits on lands that have been withdrawn for the past 40 years.
- Closing large areas to mining would result in negative economic impacts to the region.

L.2.5. Recreation and Travel Management

Several commenters expressed opinions about the personal value of recreation and approval of current management for recreational values in the White Mountains National Recreation Area (NRA) and the Steese National Conservation Area (National Conservation Area). Others expressed concerns about access; either the lack of access or damage to resources from motorized access. For example:

- The White Mountains and Steese are exceptional for both their proximity to Fairbanks and their outstanding wildness and recreation potential. Both areas are certain to grow in popularity, and the White Mountains trail system is one of the nation's premier backcountry cabin systems. Any economic activity that threatens the recreation potential of these areas would be shortsighted and akin to "killing the goose that lays the golden egg."
- We like the way that the BLM manages the White Mountains NRA now. Don't change things.
- Restricting motorized access to these vital hunting and fishing areas would cripple our ability to provide for our families.
- We do not need any more land or access control. We have lost a lot of rights already. Keep it the way it is.
- If there is a need for more non-motorized trails, then construct new non-motorized trails rather than converting existing motorized trails to non-motorized. Retain all existing trails that are open to motorized use. There should be no net loss in motorized access and preferably an increase in access opportunity.
- The Alaska Statehood Act promises access to state lands; this plan is trying to deny or hinder those rights.

- As off-highway vehicles (OHVs) have improved and become larger, it is more difficult to meet weight limitations. Trail use guidelines should more closely match what the manufacturers are producing, rather than making it more difficult for users to enjoy motorized recreation.
- The ability to use recreational vehicles, aircraft, and boats to access vast tracts of public land is very important due to the lack of secondary roads within the planning area.
- Use of all-terrain vehicles (ATVs) are ruining the land because they destroy the ability of the soil to absorb nutrients.
- OHVs destroy habitat, disrupt wildlife, and leave scars in wetlands that will last for decades.

L.2.6. Special Designations

Many comments are both in support of and in opposition to special designations such as wilderness characteristics, ACECs, and wild and scenic rivers. Examples of comments in support of these types of management include:

- The BLM should manage the Upper Black River area to maintain wilderness characteristics to protect traditional and customary use patterns for current and future generations of Gwich'in. This area is unsurpassed for remoteness and wildness. It is worthy of designation as wilderness and a national conservation area.
- Some areas should be set aside for people to enjoy solitude and primitive recreation undiminished by development.
- The RMP should be conservative and preserve wilderness areas because we do not fully understand the importance of wilderness. Development should be tabled until we have more knowledge. Once a wilderness area is opened for any kind of development or use, it is immediately diminished and will never be “truly wild” again.
- The power of being in quiet, untouched wilderness is healing. Our children and future generations need such places to be preserved because the mushrooming industrial activities have consumed places and spaces that my parents' generation simply took for granted.
- Preserve wilderness -for its intrinsic value to the ecosystems and maintenance of clean air, water, and healthy wildlife and people.
- The BLM should recommend rivers as suitable for designation under the Wild and Scenic Rivers Act in the agency preferred alternative, not just in Alternative B.
- The BLM should designate ACECs and limit uses within these areas to protect the important and relevant values.
- Close the Fortymile Wild and Scenic River Corridor, including its recreation and scenic segments, to new federal mining claims.
- Manage the Pinnell Mountain National Recreation Trail to maintain the scenic beauty and wildlife habitats of the surrounding areas. Opening lands to mining or oil and gas leasing, north of the trail and east of Preacher Creek, would degrade the experience on the Pinnell Mountain Trail.

- The Draft RMP proposes to maintain too few acres of lands with wilderness characteristics, resulting in unacceptable degradation of the pristine qualities of these areas, which residents treasure and are important to wildlife. Manage to maintain wilderness characteristics to be consistent with purposes for which the Steese National Conservation Area and White Mountains NRA were established.

Other comments did not support single-use designations such as wilderness, wild and scenic rivers, or any other restricted designation. Examples of comments in opposition to these types of management include:

- Wilderness designation only allows access for an elite few.
- Managing to maintain wilderness characteristics violates ANILCA and is a *de facto* wilderness designation.
- Properly evaluate the mineral potential of these areas before implementing special designations that may interfere with Alaska's economic development.
- Manage only the Beaver Creek WSR corridor in the White Mountains for wilderness characteristics.
- The BLM should not designate any areas as ACECs, wilderness, or wild and scenic rivers.
- The designation of ACECs (or any designations) would unnecessarily impede the ability of the BLM to facilitate responsible resource exploration and development on public lands and would interfere with public use and access.
- It is absurd to claim that there is either a wild or scenic river existing within the highly industrialized Fortymile River.
- The Draft RMP recommends management of too many acres for wilderness characteristics.

L.2.7. Out of Scope

Many comments were beyond the scope of the RMP because they involve decisions that the BLM does not have the authority to make or are they are not a required land use planning decision. Some examples include:

- "Remediation of Salmon Village was not included in the Draft EIS. The Old Salmon Village needs to be protected." Response: Old Salmon Village is located on the Yukon Flats National Wildlife Refuge. Commenters should direct questions related to protecting this site to the U.S. Fish and Wildlife Service. This RMP only covers BLM-managed lands.
- "It would be nice if the BLM provided more [signage] on the trails in the White Mountains, built more cabins and trails, and provided more educational outreach." Response: These are administrative actions that can occur now and do not require a RMP to implement.
- "Please provide public easements through selected native corporation lands." Response: Designation of ANCSA 17(b) easements for public access occurs during land conveyance, which is an ongoing activity not regulated by the RMP.

- "Responsibility for all lands in Alaska should be returned to the Alaska Natives." Response: Congress would need to address changes to ANCSA.

- State "House Bill 77 if passed would remove public participation on state permit processing. How can we support the RMP knowing that the State of Alaska will not have to consult with the tribal governments?" Response: House Bill 77 is proposed state legislation. The actions of the State Legislature are outside of BLM's authority.

- "Include predator control in the plan or explain why the BLM does not have the authority to make predator control decisions or why it is not a required land use planning decision". Response: The BLM considers predator control a state function and it is not a required land use planning decision. The Scoping Report available online at http://www.blm.gov/ak/eirmp describes in detail why predator control is beyond the scope of this RMP.

- "The BLM should manage areas in the Fortymile Subunit that have not been assessed with the Wilderness Review Process as 'Potential Wilderness Study Areas' (PWSA) under BLM's Interim Management Policy, until such time as they have been removed from further consideration through the Wilderness Review Process or until Congress makes a determination of their ultimate management." Response: The designation of potential wilderness study areas is outside the scope of the RMP. Additionally, BLM Manual 6330 – Management of BLM Wilderness Study Areas, does not apply to Alaska outside of the Central Arctic Management Area Wilderness Study Area.

L.3. Consultation and Cooperating Agencies

L.3.1. Tribal Consultation

The Gwichyaa Zhee Gwich'in tribal government and Chalkyitsik Village are cooperating agencies. The BLM has engaged in government-to-government consultations with them. The BLM made minor changes to alternatives, clarifications and editorial changes based on comments from tribes.

The Gwichyaa Zhee Gwich'in tribal government made the following formal requests or comments at a government-to-government consultation meeting in May 2012. The BLM responded to these request in writing on August 12, 2012.

Formal Request	BLM Response to Gwichyaa Zhee Gwich'in tribal government
Designate the Upper Black, Kandik, Salmon, Grayling and Wood rivers as wild and scenic rivers.	The RMP recommends the Salmon Fork suitable as a wild river in Alternative B of the Proposed RMP/Final EIS. Designation requires an act of Congress. The BLM did not find any outstandingly remarkable values (ORVs) on the other four rivers.
Retain all ANCSA 17(d)(1) withdrawals in the Upper Black River Subunit until further study.	Alternative B of the Proposed RMP/Final EIS recommends keeping the entire subunit withdrawn from mining and closed to mineral leasing. The Proposed RMP (Alternative E) recommends keeping 77 percent of the subunit withdrawn from mining and closed to mineral leasing.
Conduct cultural and biological documentation or research before removing any withdrawals and opening areas to mining.	The BLM conducted three inventories in the subunit and will continue to work with the State and other federal agencies to inventory and monitor fish and wildlife populations and habitats, but will not necessarily conduct additional research before recommending to the Secretary to revoke withdrawals if that is the final decision.
Continue consulting with the Gwichyaa Zhee Gwich'in tribal government.	The BLM is committed to continued and expanded government-to-government consultation with the Gwichyaa Zhee Gwich'in tribal government.

Formal Request	BLM Response to Gwichyaa Zhee Gwich'in tribal government
Provide a written response on why the Draft RMP/EIS identified a preferred alternative (before public comment period).	The Council of Environmental Quality (40 CFR 1502.14) and BLM regulations (43 CFR 1610.4–7) require that the agency identify a preferred alternative in the Draft EIS, if one exists.
Allow the tribe be a signatory and participate on any working group for any future EIS (and regional management plan level) in the Eastern Interior Region.	While BLM's planning process does not include formation of a "Record of Decision working group," the BLM will ensure that the tribe's input is sought and remains informed as the BLM develops and finalizes the Proposed Eastern Interior RMP/Final EIS and record of decision. Briefings with the State Director are internal to the agency.
Designate the entire Upper Black River Subunit as an ACEC. The cultural/fish values of the Upper Black River are substantial and of more than local importance.	The BLM reevaluated the area nominated for the Black River ACEC twice: first based on public comments and the second time based on comments from the tribes on the Preliminary Proposed RMP. From information available at that time, the BLM found that only the Salmon Fork watershed meets the relevance and importance criteria for ACEC designation. The Salmon Fork is a proposed ACEC in all action alternatives. However, the entire subunit is not considered as a potential ACEC in the Proposed RMP/Final EIS.
Provide a copy of the Draft RMP/EIS to the Gwich'in in Canada for comment.	The BLM notified the Kluane, Tr'ondek Hwech'in, Vuntut Gwitch'in, and White River First Nations, the Gwitch'in tribal Council, Inuvik, NT, and Northwest Territories Region Indian and Northern Affairs of the availability of the Draft RMP/EIS and provided them with copies of the document.
Reconsider the Section 810 finding of no significant restriction in the Upper Black River subunit.	The BLM revisited the Section 810 findings in the Upper Black River Subunit as part of this Proposed RMP/Final EIS. The findings are in Appendix J.
Schedule a meeting between the BLM Alaska State Director and the Gwichyaa Zhee Gwich'in tribal government.	The BLM State Director met with the Gwichyaa Zhee Gwich'in tribal government on March 6, 2013 in Fort Yukon and again by teleconference on February 24, 2015.
Enter all Gwichyaa Zhee Gwich'in tribal government comments and questions into the official record for the RMP.	The comments and questions are part of the administrative record for the RMP.
The Gwichyaa Zhee Gwich'in tribal government and Tanana Chiefs Conference (representing 42 villages within the region support Alternative B of the Draft RMP/EIS	The BLM recognizes that tribal governments support Alternative B in the Draft RMP/EIS. The Proposed RMP (Alternative E) incorporates several elements from Alternative B.

Concerns of Chalkyitsik Village and Gwichyaa Zhee Gwich'in tribal governments

The BLM provided the Gwichyaa Zhee Gwich'in and Chalkyitsik Village alternatives for the Preliminary RMP/EIS for review in September 2014. The tribes submitted joint comments in January 2015. The table below lists the tribes' major concerns and requests from their comment letter submitted January 30, 2015. The tribes also adopted and incorporated by reference the Black River Working Group, Alaska Wilderness League et al., and scoping comments from the Chalkyitsik Village Council submitted to the BLM on the Draft RMP/EIS. Additional comments submitted in April and May of 2016 reiterated tribal concerns about the size of the Salmon Fork ACEC, possible revocation of withdrawals in the Black River, and request for additional riparian conservation areas on Bull Creek.

Concerns	**Requests and Recommendations**	**BLM Response**
Tribal consultation inadequate	Refrain from making any decisions with the potential to harm tribal interests until completing adequate consultation and gathering of traditional and local knowledge.	The BLM held two section 810 hearings in both Chalkyitsik and Fort Yukon (one with Draft RMP public meetings and one with the Supplement to the Draft RMP).
Unsupported finding of "no significant impact" on subsistence; failure to provide ANILCA section 810 hearing and to make section 810(a)(3) determinations concerning impacts on subsistence.	Maintain ANCSA withdrawals and closures to locatable and leasable minerals (and other forms of development with the potential to adversely affect subsistence) throughout the subunit until after ANILCA section 810 procedural and substantive requirements have been satisfied.	The BLM held two section 810 hearings in both Chalkyitsik and Fort Yukon. The BLM found that the Proposed RMP (Alternative E) would have no significant restriction on subsistence uses. Therefore the determination process described in ANILCA Sec. 810(a)(3)(A), (B), and (C) is not required. We have satisfied the procedural requirements of Section 810.
Lack of clarity in narrative text and maps regarding withdrawals accompanying State-selected and Native-selected lands	Revise narrative text and maps to clearly demonstrate that selected lands will not be immediately open to mineral development as a result of revocation of ANCSA withdrawals or BLM management decisions.	The BLM has revised the referenced maps and text to clarify this point.
Premature decisions relating to ANCSA withdrawals and mineral development without knowing which selected lands the BLM will convey or how these lands will be used by the State and Native entities.	Maintain ANCSA withdrawals and closures to locatable and leasable mineral development until the BLM has completed conveyances and State and Native corporations relinquished over selections.	The Proposed RMP/Final EIS does not recommend retaining all ANCSA withdrawals until all conveyances are complete, as it will take many more years to finalize all conveyances. The Proposed RMP (Alternative E) does recommend retaining ANCSA withdrawals within the Salmon Fork ACEC, RCAs, and Black River watershed until they can be replaced with a new withdrawal. The Secretary of the Interior makes the decision to retain or revoke.
Geographic scope of the proposed ACEC is too small; it only protects the Salmon Fork watershed. Decision fails to take into account traditional and local knowledge regarding fish, wildlife, subsistence, historic, and cultural resources.	Expand the ACEC southward to encompass additional watersheds important for fish, wildlife, subsistence, historical and cultural resources, including the mainstem Black River, Grayling Fork, Bull Creek, and Wood River watersheds. Make southern boundary of the ACEC conform to original ACEC nomination by Chalkyitsik Village in 2008.	The Proposed RMP (Alternative E) does not expand the Salmon Fork ACEC. Based on current knowledge, the larger Black River nomination does not meet the importance criteria in the BLM ACEC Manual. Nor is special management needed to protect existing values. The BLM cannot designate an ACEC based on a lack of data. Positive findings on relevance, importance, and special management are needed for ACEC designation. We will seek funding to conduct a moose telemetry study in this area to gather more information on the area's importance to moose. If additional information collected in the future indicates that the area meets the relevance and importance criteria, and requires special management, we could reconsider designation in future planning efforts. We will also use information from this study when considering any proposed activities in the area or for developing mitigation measures to protect moose habitat and subsistence.

Concerns	Requests and Recommendations	BLM Response
Several important watersheds are not included in the riparian conservation areas (RCA), but the tribes' main priority is to encompass these watersheds in an expanded ACEC.	Tribes strongly support expansion of RCA designations from 13 to 28. See above regarding the proposal to expand ACEC to encompass important watersheds not currently proposed for designation as part of an ACEC or RCAs (especially excluded areas of the mainstem Black River, Grayling Fork, Bull Creek, Wood River and their tributaries).	The BLM revisited the RCA designation based on the January 2015 comments, but did not find that the referenced watersheds met the criteria for an RCA. In May 2016, tribes submitted additional information on Bull Creek that does support identifying at least lower Bull Creek as an RCA. These comments were submitted late in the planning process and we did not identify Bull Creek as an RCA in the Proposed RMP.
Regarding exclusion of locatable mineral development within ACECs and RCAs, Alternative E is an improvement over Alternative C, but not protective enough. It would allow excessive degradation outside of designated areas.	The BLM should expand the ACEC as indicated above, and apply mineral exclusions throughout the expanded ACEC as well as RCAs to ensure consistency with management objectives for those areas and protect key watersheds important for fish, wildlife, subsistence, historical, and cultural values. Tribes also recommend applying mineral exclusions more broadly throughout entire subunit to preserve character of subunit, protect resources, and ensure consistency with management of neighboring conservation system units.	The BLM appreciates the tribes concerns and understand the upper Black River is culturally important to the Gwich'in. We are charged with managing for multiple use and sustained yield; a recommendation to the Secretary to open 26% of the planning area (23% of the Upper Black River Subunit) to mineral entry and leasing is a balanced proposal and will enhance the likelihood of accomplishing new withdrawals in the Salmon Fork ACECs, Black River watershed, and RCAs. The Proposed RMP (Alternative E) recommends closing the Salmon Fork ACEC, Black River watershed and RCAs mineral leasing and locatable minerals.
Alternative E proposal to allow commercial use of forest and woodland products, gravel sales, and other mineral material sales is inconsistent with ACEC and RCA designations and would allow excessive degradation. Tribes support proposal to allow personal use of timber and forest products. The Alternative E proposal to allow commercial use of forest and woodland products, gravel sales, and other mineral material sales is inconsistent with ACEC and RCA designations and would allow	Preclude commercial forestry uses of all types, gravel mining, and other salable mineral development throughout the expanded ACEC and RCAs. Tribes also recommend precluding commercial forestry more broadly throughout entire Upper Black River Subunit.	The Proposed RMP (Alternative E) closes the Salmon Fork ACEC to commercial timber sales, with an exception for salvage sales. Salvage sales allow for removal of wood after a fire or other surface disturbance. The entire subunit would be open to mineral material sales. The BLM does not believe excessive degradation would occur. The timber in the area is not commercially valuable and there is no easy access to remove the timber, making interest in timber sales unlikely. Mineral sales are usually located adjacent to roads, and there are no roads in the Upper Black River Subunit. Nor are any roads proposed for this area. Even in areas with roads, there are few mineral sales on BLM-managed lands, as there are ample sand, gravel, and rock resources on state and private lands. Closing the subunit to all commercial timber and forest product sales would prevent the villages from harvesting biomass or special forest products from BLM-managed lands, thus reducing potential economic opportunities for local residents. If the RMP closed the area to mineral material sales and Chalkyitsik or Circle villages wanted to buy some of these materials, the BLM

Concerns	Requests and Recommendations	BLM Response
excessive degradation. Tribes support the proposal to allow personal use of timber and forest products.		could not allow it without amending the RMP. Given the long life of the RMP, the need for management flexibility in the future, and the lack of interest in timber and mineral material products in the subunit, the Proposed RMP (Alternative E) does not propose closing the entire Upper Black River Subunit to these uses. However, the BLM will evaluate all proposals for environmental impacts under NEPA and Section 810 of ANILCA. It will mitigate these impacts to the extent possible, and may modify the project to reduce these impacts. The BLM will consult with the tribes if it receives applications for these types of uses.
Alternative E fails to establish right-of-way avoidance areas in the subunit. Allowing road corridors poses a threat of direct impacts, as well as indirect impacts, due to facilitation of mining and other extractive development.	Establish right-of-way avoidance areas throughout expanded ACEC and RCAs to ensure consistency with management objectives and protect key watersheds important for fish, wildlife, subsistence, historical, and cultural values. Tribes also recommend establishing right-of-way avoidance areas throughout entire subunit.	A right-of-way includes more than roads. For example, communication sites (remote radio transmitters) and remote weather monitoring stations that improve safety in the area are issued under a right-of-way. A right-of-way avoidance area does not preclude rights-of-way. It just means the applicant tries to find alternate sites. The BLM will take a hard look at applications under its normal permitting processes and will consider subsistence resources. It will require mitigation to eliminate or reduce impacts to subsistence resources. Given the long life of the RMP, the need for management flexibility in the future, and Doyon and State inholdings in the Upper Black River Subunit, the Proposed RMP (Alternative E) does not propose a right-of-way avoidance area. The BLM will evaluate any proposed rights-of-way for environmental impacts under NEPA and Section 810 of ANILCA, and mitigate those impacts to the extent possible. The BLM will consult with the tribes if we receive applications for a right-of-way in the subunit.
The BLM has deemed the Salmon Fork of the Black River eligible in all alternatives and suitable in Alternative B. There is no good reason cited for failing to find this river suitable in Alternative E.	The BLM should recommend designation of the Salmon Fork as a WSR in the agency preferred alternative. Designation would complement management objectives in the ACEC and RCAs, as well as surrounding conservation units.	The Proposed RMP (Alternative E) does not propose the Salmon Fork as suitable for designation under the Wild and Scenic Rivers Act. This decision will not foreclose the option to consider the river for that designation in the future. The BLM revised Appendix E to clarify the non-suitable finding for the Salmon Fork and to document tribal support for the designation. The BLM determined that there is not broad public and congressional support for a WSR designation; that the Salmon Fork is within a proposed ACEC and RCAs. ACEC designation combined with the management in the Proposed RMP (Alternative E) is sufficient to protect the outstandingly remarkable river values of the Salmon Fork. No values would be foreclosed or diminished if the area is not designated as a WSR.

Concerns	Requests and Recommendations	BLM Response
The BLM declined to recommend the Black River and its tributaries for designation under the Wild and Scenic Rivers Act based on inadequate data, and through failure to gather adequate traditional and local knowledge.	The BLM should continue investigating outstandingly remarkable values, eligibility, and suitability of the Black River and its tributaries; and manage these watersheds to preserve their wild river characteristics and maintain the possibility of future designation under the WSR Act.	The BLM evaluated these rivers, but did not find any outstandingly remarkable values based on the data available. The RMP comment period identified no additional outstandingly remarkable values for these areas. As budget allows, the BLM will continue to inventory resources in the Upper Black River Subunit, including river values. Decisions in the RMP will not foreclose future consideration of these rivers if the agency identifies outstandingly remarkable values in the future.
BLMs proposed management standards relating to the preservation of wilderness are too weak and allow too much degradation.	The BLM should apply wilderness and visual resource management standards in Alternative B and Class II to the entire subunit. This will complement management objectives relating to fish, wildlife, subsistence, historical, and cultural values; preserve the character of the subunit; ensure consistency with management of neighboring conservation system units; and, maintain the possibility of future designations of wilderness or National Conservation Area.	The Proposed RMP (Alternative E) does not propose managing the entire subunit as a VRM Class II or minimizing impacts to wilderness characteristics on the entire subunit. We do propose managing the Salmon Fork ACEC and RCAs as VRM II and minimize impacts to wilderness characteristics in these same areas. Managing 47 percent of the subunit is this manner is a reasonable compromise. The vast majority of the subunit will retain wilderness characteristics over the life of the RMP for several reasons. Access is expensive and difficult; conservation system units surround the area; and the economic value of extractive resources in the area is low compared to more accessible areas of the state. Based on these factors and past history, we anticipate few surface disturbing activities. We have issued only two permits in the Upper Black River Subunit over the past 10 years: A communication site right-of-way on Snowy Peak and a filming permit involving a local trapper, with the only access by air and snow machine.

The BLM discussed the comments and responses listed above with the Chalkyitsik Village tribal representatives by teleconference on February 24, 2015, and with Gwichyaa Zhee Gwich'in tribal government on June 2, 2015, in Fort Yukon. Section L. 4 addresses additional comments submitted by tribes, tribal organizations, and tribal members.

L.3.2. Other Cooperating Agencies

The State of Alaska provided comments during both internal cooperating agency reviews and public comment periods. Section L.4 addresses the substantive comments. The BLM met with the State on several issues. The BLM made many clarifications and editorial changes, including minor changes to the alternatives, especially regarding consistency with ANILCA, in response to the State's comments. Summarized below are the State's general comments and concerns.

- The State is opposed to wild and scenic river study, eligibility, and suitability recommendations and contends this process is in direct conflict with ANILCA.
- The State is opposed to Wild Lands and managing lands for wilderness characteristics. It contends these are in direct conflict with ANILCA and FLPMA.
- Any provisions of ANILCA that apply to designated Wilderness must also apply to lands with wilderness characteristics.

- The State questions the validity of proposed ACECs and BLM's contention that these areas require special management to protect the identified values. Federal regulations and management practices currently in place are adequate to protect relevant and important values in the ACECs without a mineral withdrawal.
- The State questions the justification for research natural areas, opposes any new RNA designations, and is concerned that these designations may be inconsistent with ANILCA.
- The RMP oversteps BLM's authority to manage fish and wildlife populations. The RMP needs to consistently reflect ADF&G as the primary agency responsible for fish and game management.
- The RMP does not meet the BLM's multiple use mandate.
- The RMP must clearly show the State's ownership of navigable rivers. The State disagrees with the BLM's navigability determinations.
- The State has significant concerns regarding proposed restrictions on use of motorboats, snowmobiles, off-highway vehicles, and access. The proposed restrictions conflict with sections 811 and 1110 of ANILCA.
- The BLM must follow regulations at 43 CFR 36.11(h) to implement any proposed restrictions or limits to modes of access protected by sections 811 and 1110 of ANILCA. The BLM should recognize and commit to following the criteria and notice requirements in the USFWS and NPS regulations for implementing Section 811 of ANILCA (50 CFR 36 and 36 CFR 13).
- The State recommends deferring travel management planning to a step-down plan that is subject to robust public input.
- The State is concerned that the RMP will unnecessarily hinder access and development of state or private lands in the planning area due to limitations on access or special designations.
- The State supports revocation of the ANCSA 17(d)(1) withdrawals as they have served their purpose and are no longer needed. Additionally opening these areas to mining will enhance economic opportunities in the state and enhance the probability of economic development on adjacent state and private lands.
- The State requests that the BLM clarify discussions of withdrawals in the Proposed RMP/Final EIS, as it is unclear if the BLM is proposing new withdrawals or just retaining withdrawals associated with ANILCA designations, which are different from ANCSA 17(d)(1) withdrawals.
- Making the revocation of ANCSA 17(d)(1) withdrawals conditional upon securing new withdrawals for a completely different purpose, is inappropriate and legally questionable.
- Proposing new mineral withdrawals to provide greater protection of existing wild and scenic rivers is contrary to the WSR Act and ANILCA 606(a).
- Any new withdrawals from mineral entry are subject to Section 1326(a) of ANILCA, which states that any future executive branch action that withdraws more than five thousand acres in the aggregate shall not become effective until notice is provided in the *Federal Register* and to both Houses of Congress.

- The State provided many data sources, technical review, editorial comments, suggestions to improve readability of the document, and suggestions for changes to maps.

The U.S. Fish and Wildlife Service (USFWS) is not a formal cooperating agency. However, the BLM consulted with the agency during development of the Draft RMP/EIS. USFWS also submitted comments during the public comment period. Section L. 4 addresses substantive comments submitted during the public comment period. The BLM made clarifications, minor changes to alternatives, and editorial changes in response to USFWS comments. The BLM also considered these comments during development of the Proposed RMP/Final EIS. Major concerns are summarized below.

- The range of alternatives for the Steese National Conservation Area and Upper Black River Subunits are too narrow in scope.
- Consider riparian buffers to exclude mining in riparian areas on all streams and water bodies in the planning area.
- Limit mineral openings to lands with high mineral potential, only after evaluating fishery, wildlife, and aquatic resources in these areas
- Do not allow suction dredging in anadromous streams.
- The majority of the watersheds should be riparian conservation areas.
- Collect more baseline fisheries data, particularly on Preacher Creek and in the Black River region.
- The RMP should address intensive management and predator control.
- Strengthen and add additional standard operating procedures, including some from the BLM's Bay RMP and for migratory birds, and remove the discretionary language.
- Desired habitat conditions for fish and aquatic species are unattainable under some of the alternatives, given that alternatives recommend opening areas to mining. It is unclear how the RMP can meet the 43 CFR 3809 requirements to rehabilitate fish habitat.
- Close ACECs to mining.
- A combination of the No Action Alternative and Alternative B afford the highest probability for maintaining and enhancing fish populations and their habitats and is the USFWS preferred alternative.

L.4. Issue Topics and Responses

L.4.1. Climate Change

Comment Numbers: EIRMP000000153E-22, EIRMP000000153-28, EIRMP000000153-32, EIRMP000000148-5, EIRMP000000153B-20, EIRMP000000153B-24, EIRMP000000153B-25, EIRMP000000153B-26, EIRMP000000153B-27, EIRMP000000153B-28, EIRMP000000153B-33, EIRMP000000126-2, and EIRMP000000153B-36

Organization: Alaska Wilderness League and cosigners, Chalkyitsik Village Council, Fortymile Miners Association

Commenter Type: tribe, environmental organization, mining organization

Summary

Many comments related to climate change, including:

- Incorporate climate change into each section of the plan for each subunit, not just in a stand-alone section within the plan. This is one of the most significant factors affecting the landscape, water, habitats and wildfire over the next thirty years.
- The BLM should engage the Scenarios Network for Alaska and Arctic Planning (SNAP) to model climate change and provide objective scenarios for future landscape conditions.
- Additional information on climate change impacts is available in reports such as Global Climate Change Impacts in the United States, available online at http://www.globalchange.gov
- BLM's baseline data on climate change must be sufficient to permit analysis of impacts under NEPA. The BLM must provide the public with an explanation of both the data used in analyzing the potential effects of management alternatives and the methods used to conduct the analysis, as well as an opportunity to provide comments and propose corrections or improvements.
- Making conclusions about the cause of the warming planet is outside of the BLM's mandate and inconsequential to the BLM's responsibility to manage natural resources for the benefit of the public.
- Secretarial Order No. 3289 mandates all agencies within the Department of the Interior analyze potential climate change impacts when undertaking long-range planning exercises, developing multi-year management plans, and making major decisions regarding potential use of resources under their management. The BLM must assess impacts from the plan that may directly, indirectly, or cumulatively result in exacerbating climate change within the Eastern Interior RMP.
- Guidance in 523 Departmental Manual 1 requires the deliberate and proactive planning that is necessary now to ensure that critical resources are protected and resilient in the future. General statements that the BLM will conduct monitoring are not an appropriate form of mitigation. Simply monitoring for expected damage does not actually reduce or alleviate any impacts. Instead, a vigilant science-based monitoring system should be set out in the RMP in order to address unforeseeable shifts to the ecosystem due to climate change.

Response

Based on comments from agencies and the public, the BLM revised the RMP/EIS to include a more robust discussion of Climate, Climate Change, and Greenhouse Gas Emissions. This discussion follows the December 18, 2014, Council on Environmental Quality (CEQ) guidance that describes how federal departments and agencies should consider the effects of Climate Change and Greenhouse Gas (GHGs) emissions in their planning and NEPA reviews. This guidance explains that agencies should consider two climate issues, (1) the potential effects of a proposed action on climate change, as indicated by the estimated greenhouse gas emissions associated with the action, and (2) the environmental effects of climate change on agency proposed actions and resources. Based on the CEQ guidance, the Proposed RMP/Final EIS addresses and discusses climate change -within this CEQ 2 issue framework.

Issue Statement: (1) How will current and future BLM-authorized actions affect GHG emissions, and where a proposed action is anticipated to emit GHGs to the atmosphere in quantities that [the] BLM finds meaningful, how will [the] BLM quantify and disclose its estimate of the expected annual GHG emissions in the environmental documentation for the proposed action?

The BLM Greenhouse Gas and Climate Change 2015 NEPA Toolkit (http://ghgtoolkit.blm.gov/) was the primary tool used in analyzing current and projected GHG emissions from BLM-authorized actions, primarily placer-mining, in the planning area. The toolkit is a comprehensive tool and resource designed for use by BLM resource specialists to estimate total annual greenhouse gas emissions and output summary reports for documentation of reference data and computations. The estimate level of GHG emissions serve as a reasonable proxy for assessing potential climate change impacts, and provide decision makers and the public with useful information for a reasoned choice among alternatives.

Issue Statement: (2) How will projected climate change due to global conditions impact current and future BLM-authorized actions in the context of the reasonably foreseeable future condition of the affected environment?

Through a formal 2009 Assistance Agreement, the BLM participated in a research consortium, Scenarios Network for Alaska Planning (SNAP), with the University of Alaska Fairbanks (UAF) to conduct modeling studies intended to identify vegetation and fire regime response to projected future climate changes in Interior Alaska. The BLM incorporated the analysis of these climate change projections and associated objective models of landscape conditions into the RMP. The SNAP Program published a summary report of simulation results for eastern Interior Alaska to the program website for reference by agencies and the public. The report is also available on the BLM Eastern Interior website at http://www.blm.gov/ak/eirmp. The EIS uses outcomes from this report, as well as historical climate data, to help describe the existing environment and to discuss climate change impacts in Chapter 4. These predictions were also used to help develop Standard Operating Procedures (SOPs) and Fluid Mineral Leasing Stipulations that would be adaptable over time.

L.4.1.1. Analysis of Climate Change Impacts

Comment Numbers: EIRMP000000153B-32, EIRMP000000153B-38, EIRMP000000153C-41, EIRMP000000157-6, EIRMP000000220-4, EIRMP000000055-7, EIRMP000000153-48, EIRMP000000153B-21, EIRMP000000153B-35, and EIRMP000000455-2

Organizations: Alaska Wilderness League and cosigners, Eastern Interior Federal Subsistence Regional Advisory Council, Northern Alaska Environmental Center

Commenter Types: environmental organizations, federal advisory committee, and individuals

Summary

- The cumulative effects of shifts in ecological patterns that are documented through climate change in the region are not adequately addressed in the Draft EIS. The BLM needs to consider the uncertainty about future impacts of climate change in the cumulative impact assessment. For example, draw down of water for mining activities in conjunction with climate change-induced drought would greatly decrease stream flow and ground water quality. Mining activities that reduce steam flow could also exacerbate warming temperatures and that could affect vegetation and specific water temperature ranges critical to fish health.

- The BLM is required to include qualitative analysis of impacts. A suggested approach for this type of analysis can be found in the "Risk Assessment" section in the document entitled, "Recommended Risk Assessment and Management Approach for Addressing Climate Change in BLM Land Use Planning." Although there is no widely accepted method to assess and manage risk, breaking risk down into its component parts—vulnerability, exposure, and uncertainty—is a useful way to think about risk to biodiversity and productive potential.

- Many prescriptions in the RMP may contribute to and exacerbate the impacts of human-induced global climate change. In addition to a genuine analysis of impacts, it is imperative that the BLM craft strategies in its alternatives for addressing the impacts of climate change both in terms of mitigating management decisions' contributions to climate change and adapting to inevitable impacts of climate change.

Response

The climate model results from Rupp and Springsteen (2009b) show that Eastern Interior Alaska is projected to become warmer and drier over the next century and are in broad agreement with other global climate model results for Interior Alaska (Chapman and Walsh, 2007; NOAA, 2013). Warmer temperatures and a longer growing season are expected to increase evapotranspiration enough to outweigh a regional increase in precipitation. Their simulation results show a general increase in wildland fire activity through the end of this century in response to projected warming temperatures and less available moisture. It suggests that boreal forest vegetation will change from a spruce-dominated landscape to a more deciduous-dominated landscape. In spite of the vegetation shift towards less flammable younger age stands and deciduous species, the simulation results indicate that there will be more frequent wildland fires, resulting in an overall increase in area burned annually. Projected future climate changes include:

- Increases in annual average temperatures over the coming decades at an average rate of about one degree F per decade from the 1961-1990 historic 30-year average (about 24 degrees F). Rising in average annual temperature by about 6.4 degrees F by 2049, and by as much as 9.4 degrees F by 2099.

- Increases in average annual precipitation (about 16 inches) to 19.6 inches by 2049 and to 21.1 inches (about 30 percent) by 2099, but these increases will not be enough to offset increases in potential evapotranspiration in the Eastern Interior region, especially during the last half of this century.

- These projected future climate changes suggest the recent (1949-2005) warming trend in Interior Alaska will continue over the next few decades with similar resource impacts, as discussed in Chapters 3 and 4. Current and future projected climate change impacts that affect BLM management actions and resources are primarily related to a warming climate and include: 1) thawing permafrost, 2) increased length of growing season, and 3) increased wildland fire frequency. The BLM continues to utilize Adaptive Management as a tool in managing lands and resources to predict, mitigate, implement, monitor, and adapt to climate change impacts as well as in NEPA analysis of current and future BLM-authorized actions in the planning area.

L.4.1.2. Greenhouse Gas Emissions Assessment

Comment Number: EIRMP000000153B-22, EIRMP000000153B-29, and EIRMP000000153B-30

Organization: Alaska Wilderness League

Commenter Type: environmental organization

Summary

Under Executive Order 13514, the BLM is required to analyze greenhouse gas emissions (GHG) as part of the EIS. The Draft EIS does not include an estimate of greenhouse gas emissions, nor does it estimate the significance of greenhouse gas emissions for each alternative.

Response

The BLM completed quantitative analysis of greenhouse gas (GHG) emissions for the largest GHG emission sources in the planning area, communities, and seasonal placer mining respectively, as part of the Proposed RMP/Final EIS (sections 3.2.1.2 and 4.3.1.1). In determining what levels of GHG emissions to measure as "significant" under NEPA, the BLM followed the December 18, 2014, Council on Environmental Quality (CEQ) guidance.

Guidance is focused on: (1) encouraging agencies to draw from their experience and expertise to determine the appropriate level (broad, programmatic, or project- or site-specific) and type (quantitative or qualitative) of analysis required to comply with NEPA; and, (2) recommending agencies focus their analysis on the projects and actions with the greatest impacts by providing a reference point of 25,000 metric tons of CO2-equivalent emissions (MtCO2e) on an annual basis, below which a quantitative analysis of GHG emissions is not recommended unless it is easily accomplished. This guidance does not change or substitute for any law, regulation, or other legally binding requirement, and is not legally enforceable. Furthermore, the CEQ does not propose the 25,000 metric tons of CO2e reference point as an indicator of a level of GHG emission that may significantly affect the quality of the human environment, as that term is used by NEPA, but rather serves as a minimum standard for reporting emissions under the Clean Air Act.

Our analyses of projected development in the planning area shows GHG emissions associated with local communities would continue to be the largest anthropogenic source of GHG emissions within the planning area. In 2010, the Fairbanks and Delta areas contributed the most GHG emissions 1,893,205 and 196,382 MtCO2e, respectively. The Eagle area, at 12,803 MtCO2e, and Fort Yukon area at 42,129 MtCO2e, contributed the least emissions (Table 3.6).

In 2014, active placer operations (exploration, suction dredge, small and large placer mines) on BLM-managed lands contributed, in total, approximately 4,100 MtCO2e; less than 20 percent of the 25,000 MtCO2e annual emissions levels, above which quantitative reporting of GHG emissions is recommended by CEQ (2014). For comparison, total GHG emissions for all subunits under Alternative D, the most pro-development alternative, were estimated at 7,500 MtCO2e annually, well below the 25,000 MtCO2e reporting limit (Table 4.6).

There are no current or projected large-scale lode mines on BLM -managed lands. However, for reference, there are two large-scale lode gold mines within the planning area boundary; Fort Knox Mine near Fairbanks reported 2014 GHG emissions of 417,000 tonnes CO2e (www.kinross.com)and Pogo Mine near Delta reported 2007 GHG emissions of 75,000 tonnes CO2e (www.teck.com).

The BLM will address estimates of GHG contributions from travel and transportation activities, including emissions from OHV use, in the forthcoming travel management plans. However for context, based on anecdotal reports from recreation staff, GHG emissions from recreation OHVs would likely be less than half of the annual emissions associated with the placer mining industry.

Specific data on greenhouse gas emissions from wildland fire in the planning area was unavailable due to a lack of detailed vegetation inventory information and an associated historic burn severity inventory. While general statewide emissions estimates from the past for Alaska are available (ADEC 2015), more refined, higher resolution estimates for wildland fire emissions specific to the planning area are not available at this time.

L.4.1.3. Carbon Sinks

Comment Number: EIRMP000000153B-31

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

Because failure to conserve carbon sinks results in direct and quantifiable greenhouse gas (GHG) emissions as well as indirect effects from reduction in carbon sequestration, the BLM should analyze the GHG effects of destruction of carbon sinks as part of the EIS. The analysis of GHG effects of destruction of carbon sinks should be both in terms of carbon already stored in the landscape and the soil itself in terms of the landscape's ongoing carbon-capturing properties.

Such an analysis requires that an initial inventory of carbon storage potential be conducted for each landscape. The environmental review should assess and where possible quantify all the various component carbon pools – live trees, other vegetation, dead trees or vegetation (coarse, woody debris and snags), logs, litter, duff, and mineral soil – and the fluxes of carbon to and from these pools, due to natural processes like decay and fire. Also those associated with management, harvest and/or manufacture of extracted resources, including the burning of fossil fuels needed to remove, transport, and process those materials. In conducting this assessment, the BLM should account for fluxes associated with fire management and the restoration of the resilient native ecology separately.

Response

There are no reasonably foreseeable land-use actions associated with the proposed alternatives that would result in a substantial anthropogenic- related change in landscape carbon sequestration in the planning area. For the purpose of this plan, the net contribution to atmospheric carbon from effects of climate change will likely be minimal. Increased wildland fire frequency and, to a lesser extent, thawing permafrost, would likely contribute carbon. However, increased temperatures, length of growing seasons, and expanded growth of forests in former permafrost-rich areas would all act as carbon sinks. Release of carbon from thawing of permafrost soils remains a concern. However, Schurr et al., (2009) found that areas that thawed over the past 15 years had more annual losses of old carbon than minimally thawed areas, yet had overall net ecosystem carbon uptake as increased plant growth offset these losses.

Assessment of various component carbon pools and the fluxes of carbon to and from these pools are beyond the scope of this plan, but it is a topic of on-going research. Much of the available information for Interior Alaska is associated with the Long-Term Ecological Research (LTER) network program and the Bonanza Creek LTER site near Fairbanks. Researchers report, “Because a relatively large fraction of soil carbon is at or near the soil surface, boreal forest carbon dynamics track inter-annual fluctuations in climate and disturbance more closely than in other biomes. This sensitivity, coupled with the large size of the boreal forest soil carbon reservoir and the predicted magnitude of climate change at high latitudes, reinforces the widely held view that the boreal forest will strongly influence future atmospheric CO2 levels. It is clear, however, that long-term assessments of the decomposition rates of major litter types, including roots, coarse woody debris, and bryophytes, are needed to complete our understanding of carbon balance and nutrient cycling.” (Valentine et. al. 2006).

Specific data on carbon emissions from wildland fire in the planning area was unavailable due to a lack of detailed vegetation inventory information and associated historic burn severity inventory. While general statewide emissions estimates from the past for Alaska are available (ADEC 2015), more refined, higher resolution estimates for wildland fire emissions specific to the planning area are not available at this time.

L.4.2. Cultural and Paleontological Resources

Comment Number: EIRMP000000307-2

Commenter Type: individual

Summary

The comment states that the RMP is incomplete in terms of cultural resource sites. It also implies that the BLM is not considering Alaska Native sites in its planning process.

Response

The commenter is correct that the RMP does not present all archaeological sites actually present in the planning area. The plan indicates 2,500 known sites in the planning area, and about 365 of those sites are on BLM-managed lands. Relatively little of the land in Alaska has been systematically surveyed for cultural resources. There are likely thousands more sites in the planning area not yet known about. The BLM needs to proceed with the currently available information, no matter how few sites that number actually is. The commenter also seems to indicate that only certain types of sites (i.e., Euroamerican) are among the known sites listed in the Alaska Heritage Resources Survey (AHRS) (i.e., Alaska’s listing of known cultural sites). The commenter points out that "they don't consider our [Alaska Native] sites as historical places." This is not the case. The AHRS is a listing of all archaeological sites across the state, regardless of cultural affiliation (Alaska Native, Euroamerican, or other). Archaeologists are interested in the entire history of Alaska, from the first peopling more than 12,000 years ago up to the present.

L.4.2.1. Survey and Inventory of Cultural Sites

Comment Number: EIRMP000000157-5

Organization: Eastern Interior Federal Subsistence Regional Advisory Council

Commenter Type: advisory committee

Summary

Hard rock mining in the White Mountains NRA would impact "traditional activities" and unknown Alaska Native cultural sites. The BLM should conduct additional survey work to inventory important Gwich'in cultural sites.

Response

BLM archaeologists and management agree with the statement that “additional survey work should be conducted to understand and inventory important Gwich'in cultural sites" in the White Mountains NRA and throughout the planning area. We also agree with the implied issue that not enough cultural inventories have been done in the planning area, and that there are probably many more Alaska Native cultural sites than those we know about. Existing federal cultural laws, in particular the National Historic Preservation Act, are in place to discover and protect/mitigate damage to cultural sites when any action on federal land (such as hard rock mining) takes places. BLM archaeologists are very interested in Alaska Native historic and prehistoric use in the White Mountains and planning area. If hard rock mining ever proceeded in the White Mountains, federal laws and personnel are in place to deal with any repercussions to cultural sites. Furthermore, federal laws and regulations provide for involvement and participation in the cultural resources process by interested outside parties (such as Alaska Native villages and corporations).

Additionally, the Proposed RMP (Alternative E) would not allow hardrock mining in the White Mountains.

L.4.2.2. Protection of Cultural Sites

Comment Number: EIRMP000000163B-18

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The comment suggested rewording a decision under Cultural Resources to add in a statement on restricted access to the inventory of sites to protect them from inappropriate use and destruction.

Response

This decision under section 2.6.2.2 Cultural Resources was changed in the Proposed RMP/Final EIS to: "Maintain an inventory of archaeological sites and localities for the planning area. The locations of these sites and localities are protected by federal law from disclosure to the public, certain exceptions aside, so as to better protect them."

L.4.2.3. Cultural Values of Beaver Creek

Comment Number: EIRMP000000153E-7

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

Extensive Alaska Native cultural ties exist to the Beaver Creek WSR, and the BLM did not adequately review the relevant literature when it determined that "cultural" values were not an outstandingly remarkable value in the designation of values related to the WSR. The review provided no documentation regarding the extent of the review research and no citations for relevant data.

Response

As of September 2013, the Beaver Creek WSR (127 river miles from its beginning at the confluence of Bear and Champion creeks to a point 16 river miles downstream from the mouth of Victoria Creek, where Beaver exits the White Mountains NRA and enters the Yukon Flats) still has no known cultural sites. BLM staff is aware of all archaeological surveys that have taken place inside the WSR corridor. Ethnographic studies mention use of the northern portion of the White Mountains NRA and associated portion of Beaver Creek, but do not mention specific sites or locales that were utilized. To the BLM's knowledge, there are no published Alaska Native place names studies that deal with this area. There are no known ANCSA Section 14(h)(1) sites, or applications for sites that were ultimately turned down, known within the confines of the Beaver Creek WSR corridor, nor in the entire surrounding White Mountains NRA.

Published information appears to indicate that much of the White Mountains NRA and most of the Beaver Creek WSR fell outside of the regular/traditional use of any particular Athabaskan group in the 19th and early 20th centuries, particularly the Birch Creek Gwich’in to the northeast and the Lower Tanana Athabaskans to the southwest and (earlier in time) northwest (contrast the following maps: Caulfield 1983 Maps 11A, 11B, 11C, 12; Andrews 1977 Figures 21, 28; Raboff 2011 Figure 25). References examined include the following: Andrews 1977, Caulfield, 1983, Drozda 2013, Mills 199-2013, Osgood 1936, Pratt 2013, Raboff 2001, Schneider 1976, and Will 1984. For full references see the References Cited section in the Proposed RMP/Final EIS.

However, this does not mean that the Beaver Creek WSR was not used in the prehistoric, protohistoric, and historic pasts by Alaska Native groups. It would be nothing short of astounding that any area of Interior Alaska, the Beaver Creek corridor included, was not utilized by Athabascan or earlier Alaska Native prehistoric populations. However, sites of use are not presently known. If the commenter or tribes know of references or sources that contain instances of cultural use at specific locales in the Beaver Creek WSR, we urge them to supply this data to the BLM.

The BLM follows specific guidance when considering any value as an outstanding remarkable value for a designated Wild and Scenic River. As mentioned in Appendix E.1, Wild and Scenic Rivers Inventory, Determining Eligibility "The value must be rare, unique, or exemplary in a regional or national context." In addition for Cultural values, "Sites must be rare, have unusual characteristics, or exceptional human-interest values. Sites may have national or regional importance for interpreting prehistory; may be rare; may represent an area where culture or a cultural period was first identified and described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for rare, sacred, tribal, or spiritual purposes." Any cultural sites identified in the future must then pass the threshold outlined by this guidance.

L.4.2.4. Cultural Values in Black River ACEC

Comment Number: EIRMP000000163B-126, EIRMP000000163B-127, and EIRMP000000296-3

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government and individual

Summary

The Draft RMP found that there is no data on which to recommend an ACEC designation for the Upper Black River watershed based upon cultural resources. If this is the case, the BLM should collect necessary data prior to dismissing this area for consideration as an ACEC (a culturally relevant area). In fact, later in the table (page 914 of the Draft RMP) subsistence activities are noted to occur on the mainstem Black River. Residents who have used this area would argue that the Upper Black River watershed is an important cultural site for the purpose of subsistence. The BLM should conduct subsistence use surveys and incorporate the data to assess if the Upper Black River watershed is important throughout their annual subsistence cycle. If it is deemed culturally important, then the ACEC should encompass the Upper Black River watershed.

Response

The BLM cannot designate an ACEC in the absence of supporting data. If additional data supporting an ACEC is collected in the future, we could reconsider ACEC designation in a future planning effort.

L.4.2.5. Black River ACEC Expansion for Cultural Values

Comment Number: EIRMP000000141-16

Organization: Black River Working Group

Commenter Type: concerned citizen organization

Summary

There is a significant historical and Alaska Native cultural component in the upper Black River drainage sufficient to justify a larger ACEC as recommended by those who nominated this area for an ACEC.

Response

The BLM concurs that the Gwich'in have an historical and cultural connection to the upper Black River drainage. However, an ACEC designation requires three factors: (1) an area must meet criteria of "relevance," (2) it must meet criteria of "importance," and (3) it must require "special management attention" (43 CFR 1610.7-2).

Relevance and Importance. "An area meets relevance criterion if it contains one or more of the following: 1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archaeological resources and religious or cultural resources important to Native Americans." Also, in order to qualify as "significant," This generally means that the [cultural] value [or] resource … is characterized by one or more of the following: (1) Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource. (2) Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse chance." The other characteristics listed are not applicable to cultural resources.

Although the number of presently identified archaeological and other cultural sites in the Upper Black River Subunit is admittedly very small, this factor is a lack of archaeological surveys and research in the area, not necessarily a factor of absence, as was explained in the Draft RMP. It is possible that hundreds (or more) of archaeological sites (historic and prehistoric) are present in the Upper Black River Subunit. The question is one of "significance," not presence. Are the types of sites we expect to find in the subunit rare or sensitive? Of particular religious importance? Threatened? Or, of more than local interest or significance? At present, none of these criteria applies to the known sites in the subunit, and few would apply to unknown sites waiting to be discovered.

This does not mean that the cultural sites present in the Black River Subunit (known or unknown) are either not important or significant to the Gwich'in people. Without a doubt, they are. However, the historic sites (e.g., the refugium sites mentioned in the comments) that are known and mean so much to the Gwich'in peoples in this area are locally important, and thus do not rise to the level of significance as required by the ACEC manual. While there may be quite rare, unique, and quite ancient prehistoric sites present in the area, at the present time, none such as these are known.

Special Management Attention. "To be designated as an ACEC, an area must require special management attention to protect the important and relevant values. … 'Special management attention' refers to management prescriptions developed … expressly to protect important and relevant values of an area from the potential effects of actions permitted by the RMP." In other words, even if the BLM found cultural resources in the Black River Subunit to be "relevant" and "important," they would still require a special set of protection measures in place to keep them relevant, important, and an ACEC value. In short, cultural resources in the Black River Subunit require no further protections not already adequately provided by existing laws, most notably the American Antiquities Act of 1906, the Archaeological Resources Protection Act of 1979, as amended, and the National Historic Preservation Act of 1966, amended in 2014.

L.4.3. Fish and Aquatic Species

Comment Number: EIRMP000000163B-70

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The planning issues identified for Fish and Aquatic resources (section 1.5.1.3 Draft RMP) during external scoping and internal review are not specific enough to address the management question.

Response

The BLM revised the planning issues related to fish and aquatic species in the Proposed RMP/Final EIS see section 1.5.1.4.

L.4.3.1. Management Goals

Comment Number: EIRMP000000153C-1, EIRMP000000163B-76, EIRMP000000163-17, and EIRMP000000163-20

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization and federal government

Summary

- The management goals for fish and aquatic species described for all subunits in section 2.6.1.3 are excellent, but not achievable, based on the Standard Operating Procedures and Stipulations for mining and the lack of understanding of the ecosystem within the Upper Black River.
- The fisheries goals listed in the RMP are not consistent with the National Fish Habitat Action Plan (NFHAP), as is stated in the Draft RMP. The BLM should adopt NFHAP goals and include them in the RMP.
- Previously mined streams within the planning area do not currently meet the desired stream and riparian habitat conditions outlined in the Draft RMP. It is reasonable to conclude that with any future mining, streams will not meet the desired conditions and a downward trend can be anticipated.

Response

The Standard Operating Procedures for the Proposed RMP (Alternative E) have changes to achieve management goals for fish and aquatic resources. The majority of streams in the upper Black River watershed are either within a riparian conservation area (RCA) or an ACEC, both of which have higher standards. See section 2.6.2.3 and Appendix A.4 in this document.

The fisheries goals listed in the RMP are consistent with some, but not necessarily all, of the goals found in the NFHAP. Recognizing that the BLM is a multiple-use agency and valid existing mining claims currently exist, not all fish habitat can be maintained and protected. Thus, the BLM cannot meet all of the NFHAP goals. Section 4.3.1.4 states that all BLM land-use authorizations would incorporate appropriate project design, SOPs, and mitigation, to not result in any adverse, long-term (less than 20 years) trends for water quality and aquatic habitats at the watershed level (6th level HUC).

The BLM created SOP FA-6 (Appendix A.4.2) to meet the desired conditions for fish and aquatic resources, within the life of the plan, and to meet the regulatory requirements for the rehabilitation of fish habitat when fish habitat has been impacted by instream mining. The reclamation standards found in section 2.4.1.3 have not been used in the past. The intent of SOP FA-6 and associated objectives is to reverse the downward trend and rehabilitate fish habitat in a much shorter time frame by using active, not passive methods of rehabilitation. Active revegetation of the riparian area would be necessary to meet the desired conditions for numerous resources.

L.4.3.2. Ability to Achieve Riparian Function

Comment Number: EIRMP000000163B-87, EIRMP000000164-25, EIRMP000000164-39, EIRMP000000164-4, and EIRMP000000164-40

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

- Mining reclamation plans often lack the detail needed to meet the requirements for rehabilitation of fish habitat. The RMP should include a mechanism to prevent approval of a mining plan if the applicant does not provide the detailed information needed.
- The standard operating procedures (SOPs) and management actions for riparian vegetation and function proposed in the RMP are insufficient to meet the goals and desired conditions for numerous resources, obtain proper functioning condition, or result in the rehabilitation of fish habitat within the life of the plan.

Response

The BLM regulations under 43 CFR 3809 require specific information regarding mining operations and reclamation. The BLM can and routinely does reject applications until the applicant has provided sufficient information. Also, the BLM Alaska recently created Information Memorandum AK-2015-004, which outlines measurable Performable Standards for determining when reclamation on post-mined streams and the rehabilitation of fish habitat will be considered complete as well as information required for complete mine plans.

We have revised the SOPs in the Proposed RMP (Alternative E). Please see the following in Appendix A.4: SOP Water-11, SOP Wetland-7, SOP Soils-11, SOP FA-6, and SOP FA-7.

L.4.3.3. Stream Reclamation

Comment Number: EIDRMP_mail_000000023-1, EIRMP000000040-8, EIRMP000000153C-7, EIRMP000000163-50, EIRMP000000163-60, EIRMP000000163-61, EIRMP000000163-62, EIRMP000000164-38, EIRMP000000164-42, EIRMP000000164-44, and EIRMP000000170-32

Organization: Alaska Wilderness League and cosigners, and Alaska Department of Natural Resources

Commenter Type: individuals, environmental organizations, federal government, and state government

Summary

- Previous stream reclamation efforts in Alaska have been largely unsuccessful, very expensive, and the partial recovery of stream function has been measured in decades.
- The RMP/EIS underestimates projected time frames for the recovery of stream function, fish habitat, and riparian function and these time frames are not supported by any examples from Interior Alaska.
- Clarification is needed what constitutes rehabilitation of streams within riparian conservation areas. The RMP needs to clarify what the BLM expects from permittees regarding rehabilitation.

Response

While several attempts to use a science-based approach to stream reclamation have had limited success, it is important to recognize that most of those efforts were artificially constrained to reduce cost, which also created a high level of vulnerability. Most reclamation failures are based on the absence of a site-specific design, resulting in significant stream adjustments following the completion of reclamation. These sites typically take over a decade to stabilize and revegetate. The rehabilitation of fisheries and wildlife habitat is required per the 3809 regulations. As a result, the SOPs and management decisions in the Proposed RMP (Alternative E) are written to allow instream mining practices to continue while achieving the required Performance Standards and for the recovery of stream functions in a shorter time frame than has occurred in the past.

The BLM adjusted time frames for recovery in Chapter 4. We also changed some of the SOPs and management decisions in an attempt to accelerate fisheries habitat recovery and meet the applicable Performance Standards and management goals for fish and aquatic resources (Appendix A.4).

Please see, "The following decisions apply to mining operations on all watersheds" and "Riparian Conservation Areas and ACEC Specific Requirements" in section 2.6.2.3 of the Proposed RMP/Final EIS. See also Chapter 4, "The Effect of Proposed Management Actions in RCAs and ACECs."

L.4.3.4. Analysis of Riparian Reclamation

Comment Number: EIRMP000000139-11, EIRMP000000153D-1, EIRMP000000153D-15, EIRMP000000153D-7, EIRMP000000163-47, EIRMP000000163-48, EIRMP000000209-3, EIRMP000000345-1, and EIRMP000000357-2

Organization: Northern Environmental Center, Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: Environmental organizations, federal government, and individuals

Summary

Given the harsh environment, limited growing season, complexity of stream reclamation, and examples of stream reclamation efforts (failures) in Alaska, the anticipated time for recovery for riparian and stream function have been under estimated in the Draft RMP. The analysis should acknowledge and reflect the fact that solutions to achieve successful stream reclamation in Alaska have yet to be developed.

Response

Projected time frames for recovery in Chapter 4 of the Proposed RMP/Final EIS have been adjusted. Some of the SOPs and management decisions for all watersheds have also been changed in an attempt to accelerate the time frame for recovery and meet the applicable Performance Standards and management goals for fish and aquatic resources.

L.4.3.5. Effects of WSR Designation

Comment Number: EIRMP000000163B-58

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

Analysis in the Draft RMP indicates that designating new streams as wild and scenic rivers would provide additional protection to fish and aquatic resources. This is not necessarily true because the BLM has already closed some of these areas to mineral entry. This type of statement suggests that an alternative would provide some new protection when such protection may already be in place.

Response

The impact analysis for Alternative B in the Proposed RMP/Final EIS was reviewed for these types of statements and clarifications were made. Designation may provide additional protection to aquatic resources because the BLM must manage designated rivers to protect and enhance the outstandingly remarkable values. Fish are an outstandingly remarkable value in Birch and Beaver creeks. This direction from the Wild and Scenic Rivers Act provides additional management direction when the BLM is considering authorization of activities in wild and scenic river corridors. Also, other activities in river corridors besides mining have the potential to affect fish or aquatic habitats.

L.4.3.6. Desired Future Conditions

Comment Number: EIRMP000000153E-26 and EIRMP000000163B-81

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization and federal government

Summary

- The RMP needs to set specific goals for fish populations and habitats in Beaver Creek WSR because fish are an outstandingly remarkable value of the river.
- The RMP needs to establish time frames for desired future condition metrics for aquatic habitats.

Response

The BLM will update the Beaver Creek Wild and Scenic River Management Plan after approval of the RMP. The agency will also consider more specific goals and objectives at that time.

As the BLM continues to refine reclamation techniques, it will establish time frames to achieve the desired future conditions for aquatic habitats on a project-specific basis and through adaptive management. When authorizing land use activities that would affect desired future conditions for aquatic habitats, the BLM will establish measurable Performance Standards meant to achieve the desired future conditions as required by regulations under 43 CFR 3809. Those standards would need to be met before the BLM the release of bonding or final reclamation approval.

L.4.3.7. Essential Fish Habitat

Comment Number: EIRMP000000163B-88

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The RMP states that it will implement the conservation measures outlined in Appendix G of the Final Environmental Impact Statement for Essential Fish Habitat Identification and Conservation in Alaska (NMFS 2005). These measures are included in Appendix I.6 of the RMP. One of the conservation measures in this appendix is to avoid mining in essential fish habitat. What percent of the riparian areas and floodplains containing essential fish habitat does the RMP recommended closed to locatable mining and mineral leasing?

Response

The recommended percent of closure to mining and mineral leasing ranges from 66 percent in Alternative D to over 99 percent in Alternative B. The Proposed RMP (Alternative E) recommends that 99 percent of essential fish habitat be closed to mining and mineral leasing.

L.4.3.8. Evaluating Stream Function

Comment Number: EIRMP000000163B-110

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The comment recommended the BLM use the Harman et al. (2011) hierarchical framework to evaluate stream function.

Response

The BLM will use an adaptive management approach to evaluate stream function and develop measurable objectives and is currently considering using the Harman et al. (2012) framework to evaluate stream function and to develop guidance for improved reclamation techniques. Given the anticipated life of the RMP (more than 20 years) and the uncertainty with stream reclamation techniques in Alaska, an adaptive approach is most beneficial to the resource.

L.4.3.9. Special Status Fish

Comment Number: EIRMP000000153C-3, EIRMP000000153F-2, EIRMP000000163-39, EIRMP000000163B-15, EIRMP000000141-9, EIRMP000000151-4, EIRMP000000157-1, EIRMP000000163-39, EIRMP000000188-1, and EIRMP000000371-1

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service, Black River Working Group, Tanana Chiefs Conference, and Eastern Interior Federal Subsistence Regional Advisory Council

Commenter Type: environmental organization, individuals, concerned citizen organization, tribal organization, advisory committee, and federal government

Summary

The adverse impacts from mechanized mining could lead to designation of the Fortymile River Chinook salmon as a BLM Alaska Sensitive Species.

- The Upper Black River is also important habitat for Chinook salmon, which are on the BLM watch list. The Draft RMP/EIS poorly describes fish and aquatic resources for the Black River Subunit.

- The BLM designated the Beaver Creek Chinook salmon as a BLM Alaska sensitive species in 2004 due to the downward trend of this small population, but this species was recently removed from that list and placed on a watch list. Could the previous mining in Nome Creek have affected the sustainable level of Chinook salmon in Beaver Creek?

- Due to the recent decline of Chinook salmon in Alaska and their importance to subsistence users, the RMP should provide protections to their migratory corridors and to the habitats necessary to support all life stages.

Response

Chinook salmon are not currently a BLM Watch List species in the Fortymile River or the Black River drainages, but they are in Beaver Creek. In 1999, the Alaska Department of Fish and Game (ADF&G) concluded that anadromous fish runs in the Fortymile River are at the upper limit of their natural distribution and they may not successfully reproduce on an annual basis because of an inadequate winter water flows to support a successful egg hatch. Based on information available the ADF&G delisted the Fortymile River and its tributaries from the “Catalog and Atlas of Water’s Important for the Spawning, Rearing or Migration of Anadromous Fish” about 15 years ago. Thus, mining in the Fortymile River would have minimal impacts on Chinook salmon.

The Proposed RMP/Final EIS recognizes the importance of the Black River Chinook and other species of salmon. The Proposed RMP (Alternative E) designates the Salmon Fork ACEC and identifies 28 RCAs. Section 3.2.4.1.2 of the Proposed RMP/Final EIS describes fish and aquatic resources in the Upper Black River Subunit. The submitted comment did not provide any additional information on fish and aquatic resources in the Upper Black River Subunit.

The previous large-scale mining efforts in Nome Creek, obliteration of the stream and floodplain from valley wall to valley wall, would have resulted in adverse impacts to the Beaver Creek Chinook salmon. BLM observed Chinook salmon spawning activity in the lower few miles of Nome Creek (BLM observations 1990s and early 2000s). In 2012, the BLM conducted spawning ground surveys in lower Nome Creek and did not observe any Chinook. However, 2012 was one of the lowest escapements for the Yukon River Chinook salmon stock. Finally, Chinook salmon generally spawn in larger rivers like Beaver, Birch, Chena, Salcha, Chatanika, and Tozitna, all of which are considerably larger than the upper reaches (mined) of Nome Creek.

Under the Proposed RMP (Alternative E), 99 percent of essential fish habitat, which includes migratory corridors and habitat necessary to support all life stages of Chinook salmon, would be recommended closed to mining and mineral leasing. The percent of recommended closure of essential fish habitat to mining and mineral leasing ranges from 66 percent in Alternative D to over 99 percent in Alternative B.

L.4.3.10. Impacts to Fish and Aquatic Species

Comment Number: EIDRMP-1-20011-1, EIRMP000000153C-28, EIRMP000000157-6, EIRMP000000158-3, EIRMP000000163-19, EIRMP000000163-80, and EIRMP000000126-4

Organization: Alaska Wilderness League and cosigners, Eastern Interior Federal Subsistence Regional Advisory Council, U.S. Fish and Wildlife Service, Fortymile Miners Association

Commenter Type: environmental organization, advisory committee, federal government, mining association

Summary

The Draft RMP does not accurately describe the impacts of mining on fish and aquatic resources. It either underestimates or overestimates the impacts.

- Impacts from leasable mineral development are not included.
- Consider the cumulative impacts from climate change, combined with the cumulative impacts from mining.
- The RMP should describe the long-term impacts of acid rock drainage.
- The plan is too general in describing how the BLM plans to reduce the adverse impacts from mining.
- Alternative A may not have the least amount of impacts as is described because under Alternative A the fish and aquatic resources will not benefit from the improved reclamation standards proposed in this plan.
- Mining and access to mines in the upper Black River will negatively impact critical fish habitat in the Yukon, Porcupine, and Black rivers.
- Even the slightest change in water temperature or oxygen content can have wide reaching impact to fish and other animals in the food chain. This can cause severe disruptions in many areas, including natural predators and eventually resident communities who depend on hunting, fishing, and other industries.
- The impacts from placer mining described in the Draft EIS are not realistic, as they are based on studies performed prior to the current reclamation requirements.

Response

Sections 3.2.4.1.3, 4.3.1.4, 4.4.1.2, 4.5.1.2, 4.6.1.2, and 4.7.1.2 of the Proposed RMP/Final EIS address impacts to fish and aquatic habitat.

Leasable mineral development is not reasonably foreseeable during the life of the RMP. In the future, if there were interest from industry sufficient to warrant consideration of a lease sale, the BLM would analyze the impacts from the lease sale and associated development activities in additional NEPA analysis. The BLM would make a decision to lease or not lease based on the impacts of that future analysis. In the case of coal leasing, a land use plan amendment would also be required.

Acid mine drainage (AMD) commonly forms as a result of natural geochemical processes that oxidize metal sulfides exposed at the earth's surface and is a potential environmental hazard associated with lode mining activities. The factors that influence AMD formation are highly variable from one mine to another, and among different geologic materials within a proposed mine site. Severity of adverse environmental impacts, primarily to fisheries and water quality, are often very difficult to predict due to the variability of discharge and composition, the effect of surface runoff from exposed areas of the mines during heavy rainfall, and discharge characteristics of the watershed affecting dilution and the concentration of acidic waters. Potential impacts include long-term water quality degradation and loss of fishery resources. See Jennings et al., (2008) review of "Acid Mine Drainage and Effects on Fish Health and Ecology for the U.S. Fish and Wildlife Service, Anchorage Fish and Wildlife Field Office," for more detailed information on potential impacts to fisheries. Section 4.3.1.4.2 considers cumulative effects, including climate change and includes a discussion of acid rock drainage.

Under the Proposed RMP (Alternative E), no projected large mine developments would occur in the planning area. Nonetheless, if a lode mine of any size were proposed for development on BLM- managed lands a broad set of environmental informational variables and data would be generated and developed during the NEPA analysis so that informed decisions could be made with respect to the potential for acid drainage and toxic metal release.

Appendix A includes SOPs for the revegetation of disturbed areas, specifically riparian areas. Additional requirements can be developed on a site specific basis during implementation of the approved plan of operations. Section 2.4.1.3 provides a general description of how fish habitat will be reclaimed. The BLM will use an "adaptive management" approach to achieve desired future conditions and metrics for aquatic habitats.

The BLM reviewed and revised impacts from Alternative A in the Final EIS.

NEPA only requires the analysis of activities that are reasonably foreseeable. Based on the reasonably foreseeable development scenario for locatable minerals (low mineral potential) and anticipated number of mining operations (zero), as discussed in section 4.2.1.3. Resource Use Assumptions, no mining activities are anticipated in the Upper Black River Subunit. Therefore, we did not analyze impacts in this EIS. The Proposed RMP (Alternative E) recommends closing the Salmon Fork ACEC and numerous other drainages to leasable and locatable minerals.

Citations found in Section 4.3.1.4 describe the impacts of mining where reclamation techniques are similar to those employed today.

L.4.3.11. Impacts from Mechanized Mining

Comment Number: EIRMP000000153C-35, EIRMP000000209-1, EIRMP000000296-9, EIRMP000000157-2, and EIRMP000000163-72

Organization: Alaska Wilderness League and cosigners, Eastern Interior Federal Subsistence Regional Advisory Council and U.S. Fish and Wildlife Service

Commenter Type: environmental organization individuals, advisory committee, and federal government

Summary

Mechanized machinery is only evaluated as a means for access (roads). The RMP does not evaluate the use of mechanized machinery as a tool for mining in rivers and streams. This method of mining will damage streams, riparian vegetation that negatively impacts the health and productivity of the watershed.

Surface water runoff through mine tailings can affect the "homing" instincts for salmon. The RMP should discuss these impacts.

The EIS should more fully address the effects of upstream mining on downstream aquatic habitat.

Response

Section 4.3.1.4 describes the impacts of conventional mechanized mining on fish and aquatic resources. While it's not uncommon for hard rock mine tailings, which are mined from mineralized areas, to contain metals that could impact the aquatic ecosystem, placer mine tailing involves the washing of alluvial deposits, which in general are not rich in metals considered of concern to aquatics. Suction dredging involves processing alluvial deposits within the active stream channel and would not be expected to affect the availability of metals, such as copper or lead, in the aquatic environment. As such, conventional mechanized placer mining and suction dredging activities are not likely to affect the homing instincts for salmon and therefore are not discussed in the EIS.

Section 4.3.1.4 of the Final EIS includes analysis of downstream effects. The effects of conventional mining described in this section can extend to downstream areas. The extent and magnitude of the effects that upstream mining has on downstream aquatic habitat is variable, and would depend on the amount and type of disturbance at the mine site and the success of reclamation.

L.4.3.12. Suction Dredging

Comment Number: EIRMP000000153C-32 and EIRMP000000153C-56

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

The analysis of impacts from suction dredging in the Draft EIS is inadequate. Little study has taken place regarding suction dredge mining as noted by Bret C. Harvey and Thomas E. Lisle in their report “Effects of Suction Dredging on Streams: a Review and an Evaluation Strategy.” Effects of dredging commonly appear to be minor and local, but natural resource professionals should expect effects to vary widely among stream systems and reaches within systems.

Response

The Final EIS discusses general impacts from suction dredging that are common to all alternatives and subunits in section 4.3.1.4.1. We reviewed and considered the referenced report by Bret C. Harvey and Thomas E. during impact analysis. More specific impacts from suction dredging are discussed under each subunit and action alternative. The level of analysis in both the Draft and Final EIS is commensurate with the level of impact expected from suction dredging. Site specific analysis would occur at the site specific project level, if the proposed suction dredging exceeds casual use as defined by the 43 CFR 3809.10.

L.4.3.13. Fish and Aquatic Data Gaps

Comment Number: EIDRMP_PM_000000028-1, EIRMP000000141-10, EIRMP000000153-53, EIRMP000000164-61, EIRMP000000209-4, and EIRMP000000333-3

Organization: Upper Black River Working Group, Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: individuals, concerned citizen organization, environmental organization, and federal government

Summary

Agencies need to conduct more fisheries studies within the planning area particularly in the Upper Black River Subunit, Seventy-mile River, Preacher Creek, and the Steese National Conservation Area. With this lack of fisheries information, the impact analysis in the EIS is not very accurate.

Response

More data are always helpful. With limited staff and more than six million acres of BLM land within the planning area, the BLM must rely upon case studies performed under similar conditions and observations to anticipate the impacts from land use authorizations. We performed four fishery inventories/projects in Preacher Creek and three in the Black River drainage during this planning process. We shared the data from these studies with USFWS and ADF&G. We welcome any data from fisheries studies that the USFWS has performed on Preacher Creek or other areas. We always consider partnering with adjacent land managers to collect information that would be useful for both agencies. We will consider and mitigate impacts from site specific surface disturbing activities through the NEPA process as we receive applications for activities.

The BLM has conveyed lands along the Seventy-mile River to either the State or Doyon, Limited, Inc. The majority of Preacher Creek is on Yukon Flats NWR. The remainder is within the Steese National Conservation Area. Under the proposed RMP (Alternative E), the entire National Conservation Area would remain closed to new mining claims. Additionally, the Proposed RMP (Alternative E) recommends many of the watersheds in the upper Black River watershed be closed to mining. Future studies will likely focus on areas open to new mining claims or those with existing mining claims. Current efforts are underway to develop observed/expected models for fisheries habitat and macroinvertebrate community composition across the entire planning area using a probabilistic sampling design. This study is part of the National Assessment, Inventory, and Monitoring program.

L.4.3.14. Inventory and Monitoring

Comment Number: EIRMP000000141-7, EIRMP000000153D-5, EIRMP000000163-29, EIRMP000000163-31, EIRMP000000141-8, EIRMP000000153C-6, and EIRMP000000163-32

Organization: Black River Working Group and Alaska Wilderness League and cosigners

Commenter Type: concerned citizen organization and environmental organization

Summary

- Agencies should conduct more fisheries surveys to determine the extent of anadromy as the extent of anadromy is not fully known in the planning area.
- The Supplement for Hardrock Mining in the White Mountains made no mention of additional survey work to identify anadromous streams in areas in the White Mountains that may be opened to mining, but the BLM proposes to allow mining.
- The BLM should conduct watershed assessments prior to lifting the ANCSA 17(d)(1) withdrawals for the Black River as the extent of anadromy is not known in this subunit.
- The RMP should provide some insights about the type of monitoring and inventory information that would be collected. For fish (and all organisms), understanding the population's fundamental life history properties is critical for measuring the success of management actions. The RMP should require the completion of watershed assessments prior to revocation of the ANCSA 17(d)(1) withdrawals in all action alternatives and in all watersheds not just those with moderate or high mineral potential.

Response

The BLM agrees that additional surveys to determine the extent of anadromy are needed and often cooperates with other agencies in efforts to collect this type of data. As stated in section 2.5.1.3 the BLM will "cooperate and coordinate with state agencies, federal agencies, Native organizations, and other groups to ensure efficient and effective program implementation toward conservation of native and desired, non-native aquatic species."

The Proposed RMP (Alternative E) would keep the White Mountains closed to mining and mineral leasing, thus these watersheds may be a lower priority for fish surveys and habitat assessments compared to areas that are currently open or recommended to be opened to mining or mineral leasing. The BLM’s Aquatic Assessment, Inventory, and Monitoring program uses a probabilistic sampling design, which includes sample sites distributed across the entire planning area. This program includes data collection on riparian habitat conditions, instream habitat conditions, substrate composition, macroinvertebrate and fish community composition, and water quality.

Appendix I Fisheries and Aquatic Resources describe the BLMs inventory and adaptive management strategy for fish and aquatic resources. Table I.1 identifies the type of information to be collected during the watershed assessment process. Table I.2 lists indicators used to evaluate the effects of site-specific actions on fish and aquatic species.

The BLM agrees that the extent of anadromy in the Black River watershed may not be fully known. The Proposed RMP (Alternative E) recommends keeping the Salmon Fork watershed and many other watersheds including some on the Black River, Little Black River, Kandik River, and Grayling Fork closed to mining. In the event that the ANCSA 17(d)(1) withdrawals were lifted in the Black River drainage the fish and aquatic resources will be managed consistent with this RMP and all applicable regulations. Watershed assessments will be conducted as time and funding allows and will be prioritized based on management issues at the time.

It is not feasible for the BLM to complete watershed assessments on all watersheds, thus the need to prioritize those watersheds with the most likelihood of disturbance. This decision does not preclude completing a watershed assessment on any watershed, regardless of priority should the need arise.

L.4.3.15. Riparian Conservation Areas

Comment Number: EIRMP000000170-33, EIRMP000000170-34, EIRMP000000153C-4, EIRMP000000163B-9, EDIRMP_mail_000000037-8, EIRMP000000139-10, EIRMP000000153-49, and EIRMP000000153E-25

Organization: Alaska Department of Natural Resources, U.S. Fish and Wildlife Service, Chalkyitsik Village Council, Northern Environmental Center, and Alaska Wilderness League and cosigners

Commenter Type: state government, federal government, tribes, and environmental organizations

Summary

- The Draft RMP does not clearly explain what Riparian conservation areas (RCAs) are, how they would be managed, or how people may be impacted by them. The glossary of the Draft RMP defines RCAs as “Conservation watersheds that contain the highest fisheries and riparian resource values within the planning area. In the watersheds, riparian-dependent resources receive primary emphasis and management activities are subject to specific Required Operating Procedures.” It is not clear what this definition means, required operating procedures are not explained in an understandable manner, and the RMP does not describe the priority resources in the RCAs. It does not appear that the BLM has assessed existing on-the-ground conditions, nor how such stringent management objectives would impact users.
- When considering subsistence use during the watershed ranking process used to determine RCAs, did the relative harvest need to be within BLM-managed lands?
- Within the Draft RMP there is a range of RCAs identified, but none of the alternatives protect the full Beaver Creek watershed. Since many of the streams have not been surveyed for salmon or other fish, it is important to err on the side of caution.

Response

The definition of RCA in the glossary was edited. RCAs are 6th level watersheds that the BLM has identified as priority habitats for fish and aquatic species. These watersheds have processes and functions that occur in a relatively undisturbed and natural landscape setting. Hydrologic function, such as sediment amounts and stream flow regimes resulting from disturbance, are within a natural range of frequency, duration, and intensity. Inventory efforts would focus on these areas. The watershed assessment process used to identify the RCAs was done using geospatial data and professional knowledge. Watersheds within the Eastern Interior Planning Area were categorized as either conservation or restoration watersheds. Within these two categories, BLM Alaska evaluated and prioritized watersheds based on ten factors developed by the fisheries program staff and based on fisheries science, BLM policy, and law. The process is explained in Appendix I. Section I.1.2 includes a table summarizing the values of each RCA.

Yes. Points were awarded to watersheds where it appeared that subsistence harvest of fish occurred on BLM-managed lands, based on the data available at the time.

The RMP/EIS considered alternatives that protect the full Beaver Creek watershed. The entire Beaver Creek watershed would be closed to locatable mineral entry in all of the action alternatives, except for Alternative D where leasing of hardrock minerals was considered in some headwater tributaries. In the Proposed RMP (Alternative E) the entire White Mountains NRA including all of Beaver Creek, would remain closed to mining.

L.4.3.16. Restoration Watersheds

Comment Number: EIRMP000000163-41, EIRMP000000163B-89, and EIRMP000000163B-103

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

- The RMP should describe the status of the Harrison Creek floodplain reclamation project and if this data was used in establishing SOPs, and monitoring plans.
- The BLM should consider stream buffers in watersheds where significant time and money has spent on stream rehabilitation such as Nome and Harrison Creeks.
- The RMP should not open upstream watershed areas to mining where there is active reclamation/restoration going on downstream due to the probability of undoing reclamation/restoration efforts.

Response

Under the Proposed RMP (Alternative E), the Steese National Conservation Area (Harrison Creek) and White Mountains NRA (Nome Creek) would remain closed to new mining. The BLM will consider reclamation techniques that have proved successful in these areas in future reclamation plans. Given the access rights associated with mining claims, stream buffers were not considered the best avenue for limiting the effects of placer mining.

The Proposed RMP (Alternative E) would keep all watersheds in the Steese National Conservation Area and White Mountains NRA closed to new mining claims. There are valid existing claims in the Steese National Conservation Area, however, so some mining may occur upstream of the Harrison Creek reclamation area.

L.4.3.17. RCA and ACEC Fisheries Management

Comment Number: EIRMP000000153C-5 and EIRMP000000163-55

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization and federal government

Summary

The RMP should define reduced levels of reclamation proposed for streams outside of RCAs, ACECs, and WSR because impacts from placer mining are far-reaching. The BLM should consider placing the same standards on all operations regardless of their location.

Response

The standards applying to all watersheds are outlined section 2.4.1.3 Management of Watersheds and Appendix A, SOPs. In RCAs and the Salmon Fork ACEC, additional pre-disturbance hydrological data would be required. All mining operations must meet the requirements of 43 CFR 3809, regardless of their location within or outside of an RCA.

L.4.4. Water Quality and Water Resources

Comment Number: EIRMP000000153-34, EIRMP000000164-11, EIRMP000000209-2, and EIRMP000000320-3

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization, federal government, and individuals

Summary

- The Black River is the municipal water supply for the Village of Chalkyitsik. Water quality should be maintained at or above drinking water standards. There should be a one mile setback from the river where no development is allowed.
- If there are impacts to water quality, how will the BLM handle it and what kind of enforcement will there be?
- There is a lack of consistency in proposed management and unresolved resource conflicts include continued water quality degradation stemming from non-point erosion related to 1,600 to 8,300 miles of proposed open to mining.

Response

The BLM's role in water resource management includes ensuring that BLM activities, programs, and projects comply with applicable state and federal laws and regulations and BLM-authorized activities comply with conditions and stipulations in leases and permits. Surface and ground water of sufficient quality and quantity, is integral to the successful management of the public lands managed by the BLM including those lands in the Black River area. The BLM water quality goals are to protect, restore, and maintain the natural chemical, physical, and biological quality of surface and ground waters, wetlands, and floodplains influenced by BLM resource management activities and ensure full compliance with applicable federal and state laws and executive orders.

To achieve the water quality goals, and meet the Desired Future Conditions for aquatic habitats and species, and maintain a thriving natural ecological balance and multiple-use relationship; the SOPs in Appendix A Standard Operating Procedures and Fluid Mineral Leasing Stipulations would be implemented on a project-specific basis and would include mitigation of non-point erosion impacts from any proposed mining activity. Please see "The following decisions apply to mining operations on all watersheds" and "Riparian Conservation Areas and ACEC Specific Requirements" in section 2.6.2.3 of the Proposed RMP/Final EIS.

L.4.4.1. Water Resources- Instream Flow

Comment Number: EIRMP000000096-3 and EIRMP000000096-6

Organization: Alaska Miners Association

Commenter Type: mining organization

Summary

Decisions in the Draft RMP propose reservation of instream flows. Reserving instream flows is a State authority. If the BLM wishes to have an instream flow reservation, they need to apply to the state under AS 46.15.145(a). All references to instream flow should be deleted from the RMP.

Response

The BLM has submitted instream flow water right applications for Beaver Creek, Birch Creek, and the Fortymile River, as well as seven tributaries within the Fortymile WSR corridor. The State of Alaska granted instream flow water rights for Beaver Creek in 1989. Applications for instream flow water rights for Birch Creek and the Fortymile River and its major tributaries were submitted over a period of time, 2001-2012, following 5-year documentation of flows for each stream.

Instream Flow Water Right Applications deemed complete by the State are assigned a priority date. The priority date establishes the order of priority for the allocation of water within and from the source of water. Following the prior appropriation doctrine, Alaska water rights are "first in time, first in right."

L.4.4.2. Water Quality

Comment Number: EIRMP000000141-5 and EIRMP000000164-27

Organization: Black River Working Group and U.S. Fish and Wildlife Service

Commenter Type: concerned citizen organization, federal government

Summary

- The Draft RMP states (page 774) "Land use activities permitted in the subunit, such as development of transportation routes and locatable minerals, may affect water quality at downstream locations, fish spawning or rearing areas; indirectly impacting subsistence fisheries harvested off BLM-managed lands." It further states, "No impacts to subsistence fishery resources or uses in or adjacent to BLM-managed lands are expected from the alternatives." Please explain how these two conflicting statements can be reconciled.
- How will existing water quality be protected while meeting State of Alaska water quality standards when the plan proposes opening an additional 1,600 to 8,300 stream miles to mining (range established by the various action alternatives) and the corresponding loss or degradation of riparian resources?

Response

Language in the Final EIS was revised as follows: "Land use activities permitted in the subunit, such as development of transportation routes and locatable minerals, could potentially affect water quality at downstream locations and indirectly impact subsistence fisheries harvested off of BLM-managed lands. However, no significant impacts to subsistence fishery resources, or uses in or adjacent to BLM-managed lands, would be expected from the alternatives because in instances where permitted activities could potentially impact resources, site specific stipulations to mitigate potential adverse impacts are developed and issued as part of the land use permit.

All BLM-authorized activities are required to meet State of Alaska water quality requirements. Standard Operating Procedures (SOPs) and Fluid Mineral Leasing Stipulations would be adopted for subsequent authorizations to reduce water quality impacts from surface-disturbing activities. The RMP includes goals and decisions relative to water quality in Alternatives B, C, D, and E. Additionally, Appendix A, Standard Operating Procedures and Fluid Mineral Leasing Stipulations includes SOPs that protect water quality, directly and indirectly by protection of soil and vegetative resources.

For authorizations under 43 CFR 3809, the BLM would ensure authorized uses do not impact the hydrologic regime (ground water, streamflow, water quality, biologic integrity, or floodplain/riparian connectivity) to the impairment of other private and public users above or below BLM lands. If the hydrological regime is impacted, the causes should be identified to ensure bonding is sufficient to comply with BLM Instruction Memorandum No. 2009-153 and 43 CFR 3809 regulations.

L.4.4.3. Impacts to Water Quality from Mining

Comment Number: EIRMP000000141-6, EIRMP000000157-3, EIRMP000000158-3, EIRMP000000163-86, EIRMP000000194-1, EIRMP000000204-1, EIRMP000000213-6, EIRMP000000221-1, EIRMP000000227-2, and EIRMP000000365-1

Organization: Black River Working Group, Eastern Interior Federal Subsistence Regional advisory committee, U.S. Fish and Wildlife Service, and tribal government of Fort Yukon

Commenter Type: concerned citizen organization, advisory committee, federal government, environmental organization, individuals, and tribe

Summary

Historic placer mining has resulted in short- and long-term adverse impacts to fish and aquatic resources in the planning area. There is broad concern about adverse downstream impacts associated with future mining exploration and development. Representative comments for this issue include:

- The BLM should help maintain existing intact, healthy salmon habitat and to avoid direct and indirect impacts of mining exploration and development in healthy streams and watersheds.
- Alternatives C and D would negatively impact critical fish habitat, and would most likely be detrimental not only to residents of Black River but potentially affecting subsistence fisheries along 800 miles of Yukon, Porcupine and Black Rivers.
- Mining is not compatible with the recreational purposes of maintaining the scenic and other values of Beaver Creek and Birch Creek.
- There are concerns regarding acid rock leaching.

Response

All BLM-authorized activities are required to meet State of Alaska water quality requirements. Standard Operating Procedures (SOPs) and Fluid Mineral Leasing Stipulations would be adopted for subsequent authorizations to reduce water quality impacts from surface-disturbing activities. The RMP includes goals and decisions relative to water quality in Alternatives B, C, D, and E. Additionally, Appendix A, Standard Operating Procedures and Fluid Mineral Leasing Stipulations includes SOPs that protect water quality, directly and indirectly by protection of soil and vegetative resources.

For authorizations under 43 CFR 3809, the BLM would ensure authorized uses do not impact the hydrologic regime (ground water, streamflow, water quality, biologic integrity, or floodplain/riparian connectivity) to the impairment of other private and public users above or below BLM lands. If the hydrological regime is impacted, the causes should be identified to ensure bonding is sufficient to comply with BLM Instruction Memorandum No. 2009-153 and 43 CFR 3809 regulations.

L.4.4.4. Executive Orders Floodplains and Wetlands

Comment Number: EIRMP000000164-39, EIRMP000000164-3, EIRMP000000164-20, EIRMP000000164-16, EIRMP000000153D-6, EIRMP000000153D-14, EIRMP000000153B-55, and EIRMP000000153B-51

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization and federal government

Summary

The RMP fails to consider and incorporate Executive Orders 11988 Floodplain Management and 11990 Wetland Management. The Alternative C allows for mining in stream channels and the SOPs presented in Appendix A are not sufficient to allow the BLM to meet either Executive Order. Department of Interior Policy 520 DM Departmental Manual 1.8, adopts procedures set forth in Part II of the Water Resource Council (WRC) Guidelines (43 FR 6030, 1978) for implementation of the Executive Orders.

Response

SOPs for floodplains, wetlands and riparian habitat have been updated in Appendix A.4. Procedures for implementing Executive Order 11988, Floodplain Management are set forth as an 8-step decision-making process outlined in Part II of the 1978 Water Resources Council Guidelines. When an action is proposed in a floodplain, the 8-step procedural process will be addressed and integrated in developing land use authorizations.

Procedures for implementing Executive Order 11990, Protection of Wetlands, are outlined in the updated RMP. EO 11990 requires federal agencies (BLM) to avoid destruction or modification of wetlands whenever there is a practicable alternative. DM 520 1.5 (C) states that the Department will conduct its activities regarding wetlands in accordance with the procedures outlined for floodplains.

L.4.5. Nonnative Invasive Species

Comment Number: EIRMP000000163B-9, EIRMP000000163B-93, EIRMP000000163B-95, EIRMP000000163-18, and EIRMP000000163B-108

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

- The decisions in the Draft RMP do not reflect the goal to prevent the introduction of noxious and non-native plants.
- The BLM should require any motorized vehicles accessing BLM lands be cleaned prior to entering BLM lands, especially four-wheelers and mining equipment.
- Non-native plant (terrestrial and aquatic) inventories should be completed for all areas currently and proposed to be open to mining and access routes for all planning subunits. The frequency of monitoring should be increased to implement early detection, rapid response protocols.
- The RMP should note that waterways may also be vectors for spread of invasive species.
- Include a metric in Table 2.22 of the Draft RMP for how many acres, numbers of stream miles or lakes will be infested based on each alternative.

Response

An invasive species strategic management plan for the Eastern Interior Field Office will be developed after the Record of Decision for the RMP is signed. The strategic plan goals will strive to prevent the introduction of invasive plants using all possible tools while meeting the multiple use mandates.

The BLM only has the authority to implement this type of requirement (cleaning of vehicles) on activities that require a permit. The feasibility of including vehicle washing stipulations with permits will be determined through the invasive species strategic management planning process and site specific NEPA analysis.

The recommendations are consistent with the current and proposed management of invasive species in the planning area. Eastern Interior Field Office conducts inventory, treatment and monitoring annually as funding and personnel resources are available. Early detection and rapid response (EDRR) is the primary method employed. Section 2.6.1.4 of the Proposed RMP (Alternative E) includes decisions to develop step down implementation plans, complete inventory and monitoring, monitoring of all control sites, and working with other groups and agencies regarding inventory, prevention, and control of noxious and non-native species. The step down action plan for invasive species management (Invasive Species Strategic Management Plan) will continue to support inventory and monitoring, with an emphasis on EDRR, as funding allows basis.

The Final EIS recognizes that waterways may be a vector for the spread of invasive species. That waterways may also be vectors for spread was added to Section 4.2.1.2.5 of the Final EIS.

Final EIS Table 2.26 Comparison of impacts common to all subunits: The broad scale of potential for invasive species to become established considers that the No Action Alternative cannot be selected. Therefore, Alternative B would have the least potential and Alternative D the highest potential for impacts from nonnative invasive plants. A viable model for the relationship between acres disturbed and acres infested has not been developed that has the power to predict the influence of important variables, such as climate change, persistence over time, soil pH and invasiveness characteristics of plants.

L.4.6. Soil Resources

Comment Number: EIRMP000000153C-12 and EIRMP000000163B-97

Organization: Alaska Wilderness League and cosigners, U.S. Fish and Wildlife Service

Commenter Type: environmental organization and federal government

Summary

- Under the preferred alternative in the Draft RMP exploration/seismic related activities for fluid leasable minerals could occur during the winter, which has been shown to have a lasting impact on vegetation and soils (Jorgenson JC, Ver Hoef JM, Jorgenson MT, ANWR, 2010). It could be argued that the North Slope is different than the Interior of Alaska, but the main point is that impacts to vegetation from winter exploration, which uses the same general methods as North Slope exploration, is lasting. The BLM states the impact would be minor but according to the cited publication, the impacts would last for decades.

- The goals for soil resources appear unattainable. One of the goals is to protect soil surface from erosion. How does the RMP propose to do that in areas that would be mined? Additionally how can RMP ensure "...photosynthesis is occurring effectively..." if the photosynthetic material (e.g. vegetation cover) has been removed for mining associated activities? How can the BLM achieve nutrient cycling goals in areas that would be mined if the soil, associated microbes, and vegetation are removed?

Response

The BLM would evaluate environmental conditions and potential impacts to vegetation from all winter exploration/seismic related activities for fluid leasable minerals and include stipulations to minimize adverse impacts to resources. Where winter exploration/seismic impacts were expected to be substantial, permit applications would not be approved. Mitigating soil and vegetation impacts are dependent on site specific highly variable environmental conditions, and are best evaluated on a case-by-case basis.

Section 3809.420 performance standards apply to all placer-mine notice and plan of operations. Performance standards include reclamation as follows:

(i) At the earliest feasible time, the operator shall reclaim the area disturbed, except to the extent necessary to preserve evidence of mineralization, by taking reasonable measures to prevent or control on-site and off-site damage of the federal lands.

(ii) Reclamation shall include, but shall not be limited to:
(A) Saving of topsoil for final application after reshaping of disturbed areas have been completed;
(B) Measures to control erosion, landslides, and water runoff;
(C) Measures to isolate, remove, or control toxic materials;
(D) Reshaping the area disturbed, application of the topsoil, and revegetation of disturbed areas, where reasonably practicable; and
(E) Rehabilitation of fisheries and wildlife habitat.

L.4.7. Vegetation

Comment Number: EIRMP000000153C-12, EIRMP000000164-6, and EIRMP000000131-3

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization, federal government, and individuals

Summary

- Seismic exploration in the Upper Black River subunit would impact soils and vegetation, with impacts lasting for decades (Jorgenson JC, Ver Hoef JM, Jorgenson MT, ANWR, 2010).
- What steps would the RMP take to achieve the desired outcome for vegetative communities of "largely undisturbed, except by natural forces" in alternatives where surface disturbing activities are allowed.
- The BLM plans on using natural revegetation as the preferred method, a process that will result in habitat and water quality degradation for long periods of time.

Response

The Jorgenson et al (2010) paper cited, does document changes in vegetation composition at some sites that lasted for decades on trails used by seismic exploration equipment in winter. Seismic lines constructed in the Upper Black River Subunit prior to 1980 remain clearly visible. Although site-specific changes can be high, the overall impact of seismic lines on vegetation in the subunit was characterized as minor in consideration of the small area affected relative to the large area of the subunit.

Activities such as mining will change the nature of vegetation at the site of disturbance. However, within a large area (e.g., basin or drainage), a natural diversity of species and communities can be maintained while allowing surface-disturbing activities on a small portion of the area. In the Proposed RMP (Alternative E), a majority of the BLM-managed lands in the planning area will remain closed to mineral entry/location, thus reducing potential disturbance from that source. In addition, the BLM will apply SOPs (Appendix A) to minimize disturbance and enhance recovery. The BLM will assess impacts on vegetative resources, including cumulative impacts, during NEPA analysis of site-specific land use permits.

The BLM modified decisions in the Vegetative Communities section of the Proposed RMP/Final EIS to make it clear that, although natural revegetation is the generally preferred method, where needed active revegetation may be required. This was carried over into a modified SOP (Appendix A.4, SOP Veg-1). Decision: Utilize and encourage natural revegetation of disturbed sites as the generally preferred method of revegetation (in situations where this is adequate to prevent erosion and will result in rapid establishment of plant cover). In some circumstances, however some combination of seeding, planting, and transplanting of adult plants or vegetation mats, or fertilizing may be necessary. Native species would be utilized whenever possible if seeding or planting is necessary, for example, when immediate vegetation cover is required to prevent impacts from soil erosion.

L.4.8. Special Status Plants

Comment Number: EIRMP000000163-46

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

Chapter 3 of the Draft RMP states that special status management will include proactive conservation measures designed to minimize likelihood of Endangered Species Act listing of species. Define or provide examples of "proactive conservation measures" that will minimize likelihood of a sensitive species being listed as threatened or endangered.

Response

Examples of proactive conservation measures to protect sensitive species occur in the Standard Operating Procedures designed to protect priority raptor nests (including golden eagle) and trumpeter swan nest sites from human disturbance during the nesting season. The Proposed RMP/Final EIS revises decisions in the Special Status Species section and includes development of a Special Status Species management plan, cooperation with partners in inventory and monitoring of rare species, and the ability to require project proponents to conduct inventories for special status species.

L.4.9. Visual Resource Management

Comment Number: EIRMP000000170-36, EIRMP000000170B-12, EIRMP000000170B-13, EIRMP000000170B-15, and EIRMP000000170B-16

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

- The recommendations for Visual Resource Management (VRM) classifications in the Draft EIS extend beyond BLM-managed land for some areas of the planning unit, and do not apply to State owned, or non-federal land. The BLM should remove proposed classifications from State-selected land until the permanent title of the land has been resolved.

- Maps 92, 106, 107, 108, 109 of the Draft EIS should be revised to indicate VRM classifications and recommendations for federal-lands only.

- The proposed protections for lands with wilderness characteristics and restrictions due to the visual resources inventory will effectively prohibit access, which consequently will prohibit development, although the resource areas technically remain open to development in the RMP.

- VRM SOP 1 directs to the extent practicable, all facilities and activities will be located away from the roads (except access roads), rivers, trails, and other transportation features; using distance to reduce the facility's visual impact along travel corridors. Future land uses in the planning unit will likely need to be located next to, or directly accessible to roads, trails and transportation features for access. This SOP would arbitrarily prevent the establishment of many, if not most, facilities and activities on federal lands without consideration of the merits on a project-specific basis.

- SOP VRM 5 as worded is undefined, subjective, and vague. It states, "in open exposed landscapes, development will be located in the opposite direction from the primary scenic views, where feasible." The definition of the primary scenic views is subjective and may vary among the users of the area. In addition, the siting of development may not provide the intended outcomes, and may establish activities in areas that are opposite, but cause additional or more destructive negative impacts.

Response

The BLM inventories visual values on a landscape/viewshed scale so areas beyond BLM-managed lands are included in the inventory process and descriptions of the visual landscape characteristics. These lands are included in each factor, have a visual resource inventory class assigned, and are included on inventory maps, but only BLM-managed lands will be assigned a management class by the RMP. The BLM would apply the VRM classes to lands retained from non-conveyed State-selected lands and any lands remaining from the Native selection process. The RMP decisions apply to selected lands until they are conveyed.

Visual Resource Management maps 15-25 only depict classes for BLM-managed lands. The maps referenced in the comment are the visual resource inventory maps. As described above, the inventory process is on a landscape scale and does not distinguish differences in land ownership. However, the BLM removed visual resource inventory maps 92, 106, 107, 108, 109 from the Proposed RMP/Final EIS. The referenced maps are included in the Visual Resource Inventory, a separate document from the Proposed RMP/Final EIS.

Visual resource management will not prohibit access. Project design will minimize impacts to visual resources.

The referenced SOPs were dropped from the Proposed RMP (Alternative E) because they were a statement of policy standards for visual resource management. The BLM will evaluate future actions for effects on visual resources to determine if mitigation is needed to maintain visual resource management classifications.

L.4.10. Wildland Fire

Comment Number: EIRMP000000163B-113

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

In section 4.3.1.11.1, Wildland Fire Ecology and Management, Effects Common to All Alternatives the BLM states that non-native invasive species would have either no effect or negligible effects on fire management. Given the predicted climate changes for Interior Alaska some invasive plant species typically found farther south are expected to expand their range north. Cheatgrass (*Bromis tectorum*) has infested millions of acres of BLM-managed rangelands in the Intermountain West. In Alaska cheatgrass has been documented in the interior-boreal region (and in adjacent Yukon Territory) as well as on the Seward Peninsula and south central Alaska. If allowed to establish it has the potential to invade lands within the planning area. To state that non-native invasive species will have none or negligible effects on fire management is not correct especially if the invasive plant species has the potential to change fuel properties, fire behavior, and fire frequency, extent, and intensity.

Response

An extensive invasiveness ranking system was applied to nonnative species known to occur in Alaska and those most likely to be introduced to Alaska (Carlson et al. 2008). The evaluation included climatic screening, ecosystem impacts, biological attributes, distribution and control measures. Rankings may change as new information on a species becomes available. Of the 113 nonnative species ranked for invasiveness only two may change fire regimes, cheatgrass and false brome.

Cheatgrass is most likely to become established in disturbed areas such as mining sites where a seed source occurs along with exposed mineral soil. It is doubtful that it could become established in Alaska at the landscape scale that has occurred in the Intermountain West (Chambers et al. 2013). Wildfires in Alaska, unlike fire regimes of the Intermountain West, result in significant amounts of organic matter that would impede cheatgrass from establishing large infestations.

A lack of road infrastructure also would impede seed dispersal. The reasonably foreseeable development scenario predicts low levels of surface disturbing activities on BLM-managed lands under all alternatives. False brome has not been documented in Alaska and its preference for well drained neutral soils will likely inhibit it from becoming established in Interior Alaska.

The impacts referenced by the comment and analyzed in the Final EIS refer to the impacts from proposed RMP decisions. Analysis in this section considers how management decisions to prevent introduction and spread of nonnative invasive species impacts wildland fire and ecology. These decisions likely would not have any negative effect on fire and ecology, including frequency. The comment is referring more to the baseline condition of the planning area and how climate change may affect the landscape.

L.4.11. Wildlife

Comment Number: EIRMP000000045-2, EIRMP000000045-4, EIRMP000000151-3, EIRMP000000153C-25, EIRMP000000153C-26, EIRMP000000153F-3, and EIRMP000000333-4

Organization: Tanana Chiefs Conference and Alaska Wilderness League and cosigners

Commenter Type: individuals, tribal organization, and environmental organization

Summary

- Commenters expressed concern over effects of mineral development on subsistence, trapping and furbearers in Washington Creek (Fortymile Subunit).
- The Draft RMP fails to include any meaningful discussion of identifying, managing, or protecting wildlife corridors. BLM Instruction Memorandum 2012-039 directs the BLM to

identify and manage wildlife corridors. Caribou migration corridors are important, in addition to calving habitats.

- Conservation should be emphasized in the Fortymile Subunit until studies to determine which wildlife habitats may require special protection are conducted.

Response

The BLM appreciates the reports that the Washington Creek area is important to several trappers and subsistence users. Trappers and subsistence users also use most other parts of the planning area for such purposes. We did not rate Washington Creek as a RCA and it was not included in the Fortymile ACEC because it is outside of areas of concentrated use by caribou during calving/postcalving. The RMP defers making a decision to allow coal leasing until there is interest from industry. The BLM will not consider coal leasing without an RMP amendment. The BLM will however analyze and mitigate impacts from other potential land uses during the permitting process.

IM 2012-039 (and an associated MOU between several federal departments and the Western Governors' Association) address data gathering and compiling, and mapping of crucial wildlife habitats and corridors. The Crucial Habitat Assessment Tool is not currently available in Alaska. The BLM gathered available information regarding crucial wildlife habitats from ADF&G and other sources, including BLM-gathered information, in formulating this plan. The BLM considered and identified wildlife corridors where necessary and feasible, including a migration corridor for Fortymile Caribou and associated special management. (section 2.6.2.2.1.6 Wildlife). Dall sheep movement corridors were included in Steese, Fortymile and White Mountains ACECs, as well as portions of caribou migration habitats. The Proposed RMP (Alternative E) recommends retaining the existing withdrawal of the Steese National Conservation Area from mineral location and entry, reducing potential impacts to caribou migration habitats.

Wildlife studies by the BLM and other agencies in the Fortymile area include Dall sheep, caribou, peregrine falcon, and trumpeter swan. The BLM delineated the Fortymile ACEC with the use of information about Dall sheep and caribou distributions. Wildlife habitat will be protected in the ACEC and elsewhere through additional management provisions (including SOPs, OHV/travel management, and wild and scenic river management). Additional wildlife study is desirable, and could result in later RMP amendment.

L.4.11.1. Caribou

Comment Number: EIRMP000000170-56, EIRMP000000153D-11, EIRMP000000153F-4, EIRMP000000153F-5, EIRMP000000188-2, EIRMP000000333-4, EIRMP000000254-1, EIRMP000000373-1, and EIRMP000000410-24

Organization: Alaska Department of Natural Resources and Alaska Wilderness League and cosigners

Commenter Type: environmental organization, individuals, Gwichyaa Zhee Gwich'in tribal government, and state government

Summary

- Van Kooten and others (1997) have identified areas of high oil and gas potential north of Eagle Village in the Kandik and Nation River areas. Additional exploration in these areas may verify presence of oil and gas resources. It appears that these areas have been proposed in part, for closure to mineral leasing due to identified wildlife calving and postcalving use (Map 63, Draft RMP) and wildlife wintering areas (Map 69, Draft RMP). The State maintains that protective permit stipulations and mitigations for specific seasonal use would allow multiple uses of these areas, including leasing and exploration while still protecting wildlife resources. Therefore, the RMP should not propose closing these areas to oil and gas leasing.

- The RMP should include a timeline and measurable goals to evaluate Fortymile caribou monitoring; establish strong standards to protect caribou habitat; minimize development in critical habitat areas (including the Black River area, important to Porcupine Caribou); monitor climate change; better manage hunting near roads; and protect migration corridors.

- The Upper Black River subunit is an important area for Porcupine Herd caribou and residents of Forty Yukon and Chalkyitsik. It is important to maintain the integrity of this herd and avoid industrial activities in their habitat.

- The U.S.-Canada Porcupine Caribou Treaty calls upon each of the two nations to "notif[y]" and "consult" with the other prior to making any decision likely to cause "significant long-term adverse impact" on the herd and to "avoid or minimize activities that would significantly disrupt migration or other important behavior patterns." Opening Porcupine caribou wintering areas in the southern portion of the Upper Black River Subunit, as proposed in the Draft RMP, to various types of use present a risk of significant long-term adverse impacts and appear to trigger these notification and consultation obligations and may also conflict with the duty to avoid or minimize harm.

Response

The BLM has chosen to close some areas to mineral leasing and use permit stipulations in other areas. In the Proposed RMP (Alternative E), the upper Kandik River watersheds would be closed to mineral leasing (Map 43) to protect riparian conservation areas. The lower Kandik is on State, Doyon, Limited, and National Park Service lands, as is the mainstem Nations River. Alternative C recommends the upper Kandik be opened to mineral leasing. Currently the area is under ANCSA 17(d)(1) withdrawal, which closes it to mineral leasing.

The Proposed RMP (Alternative E) has increased protection of caribou habitat by recommending closure of the Steese National Conservation Area and the Salmon Fork and Fortymile ACECs to mineral location and entry. A caribou migration corridor is designated in the Steese National Conservation Area. Other corridors occur outside of BLM lands. The Proposed RMP (Alternative E) implements strong protection measures for caribou habitat. Monitoring of the Fortymile herd occurs annually in cooperation with ADF&G and Yukon Department of Environment. Management of hunting near roads is a hunting regulation issue, outside of the scope of the RMP. Similarly, monitoring of climate change is outside the scope of the RMP, although the BLM expects to continue to cooperate in monitoring effects of climate change on wildlife habitat and caribou.

The currently available data on Porcupine Caribou distribution in the Upper Black River Subunit is displayed in Map 84. The Upper Black River Subunit contains 0.3 percent of total Porcupine herd winter concentrated use area and 1.2 percent of total herd general use area. These use areas occur on the edge of the Porcupine Caribou winter range and are not used in all years.

The Proposed RMP (Alternative E) recommends closure of the Salmon Fork and Black River watersheds and several other watersheds to mineral entry/location and fluid mineral leasing. Other caribou habitat in the subunit is generally of low mineral potential and remote, making development of much of the Porcupine caribou winter range in the subunit unlikely.

The pertinent section of the *Agreement between the Government of Canada and the Government of The United States of America on the Conservation of the Porcupine Caribou Herd*, states that, “Where an activity in one country is determined to be likely to cause significant long-term adverse impact on the Porcupine Caribou Herd or its habitat, the other Party will be notified and given an opportunity to consult prior to final decision.” The BLM does not consider the Proposed RMP/Final EIS to be an activity; however, analysis in the EIS has indicated that activities allowed by the plan are not likely to cause significant long-term adverse impacts.

L.4.11.2. Special Status and Rare Wildlife

Comment Number: EIRMP000000170-26, EIRMP000000163B-100, and EIRMP000000163B-15

Organization: Alaska Department of Natural Resources and U.S. Fish and Wildlife Service

Commenter Type: state government and federal government

Summary

- The RMP should include discussion of the future potential introduction of wildlife for the purpose of reestablishing populations to contribute to the conservation of species in North America e.g., wood bison. Establish special rules and relaxed provisions to ensure that Non-essential experimental populations (e.g., wood bison) would not impede resources development.
- The BLM should apply similar management to other sensitive and watch list species as are outlined for sensitive plants, including black-polled warbler, olive-side flycatcher, rusty blackbird and Chinook salmon, which are USFWS trust migratory species and are undergoing national population declines. Doing so would allow the BLM to meet their consistency policy with respect to adjacent land management agency's policies and Refuge purposes.

Response

The BLM is not participating directly in the wood bison introduction program and no release sites on BLM-managed lands in the planning area are proposed or envisioned, therefore there is no requirement to address the introduction in the land use plan. If the non-essential population expands onto BLM-managed lands, we would have responsibilities under Section 7 of the Endangered Species Act to confer with the USFWS on actions with the potential to jeopardize the continued existence of the non-essential population. Under the USFWS rule, ADF&G has primary management responsibility for leading and implementing the wood bison restoration effort. While the BLM anticipates it would work cooperatively with the ADF&G to promote wood bison conservation on BLM lands, we would still be required to conference with the USFWS on any actions that may adversely affect the species. The BLM has no authority to promulgate special rules under the Endangered Species Act.

Because plants are sedentary and generally more localized, site-specific provisions such as those referred to are more appropriate and implementable. Animal species are generally more mobile, dispersed, and may be more transient. These attributes make it harder to specify management actions. The BLM has revised decisions in the Proposed RMP/Final EIS under section 2.6.2.7 Special Status Species, Management Common to All Subunits and All Action Alternatives. It states that where Special Status Species habitat is likely to be negatively affected by use (i.e., such use is likely to result in a significant local or regional decline in species distribution, abundance, or productivity), such uses would be redirected to other locations, or other mitigation actions that will be effective in preventing local population impacts will be implemented. Ensure reclamation and restoration plan objectives incorporate the needs of Special Status Species where habitat potential exists. We also recognize that sensitive species may be impacted by development within and adjacent to streams and wetlands. Assessment and mitigation will take place in NEPA process. In addition, the Proposed RMP (Alternative E) closes those habitats in the Salmon Fork ACEC, Steese National Conservation Area, and Riparian Conservation areas to mineral location and leasing.

L.4.11.3. Moose

Comment Number: EIRMP000000153C-10, EIRMP000000153D-12, EIRMP000000163-2, EIRMP000000163-3, EIRMP000000163-4, EIRMP000000141-15, EIRMP000000163B-50, EIRMP000000239-1, EIRMP000000241-1, and EIRMP000000296-5

Organization: Alaska Wilderness League and cosigners, Black River Working Group, and U.S. Fish and Wildlife Service

Commenter Type: concerned citizen organization, individuals, environmental organization, and federal government

Summary

- The RMP needs to specifically address moose populations and habitat in decisions and expand on the discussion of moose in Chapter 3, Affected Environment.
- Traditional ecological knowledge and local ecological knowledge tell us the upper Black River drainage, including the Grayling Fork, Bull Creek, and Wood River are important moose calving and migration habitats, moose harvest areas, and supplement Yukon Flats moose populations. This area meets the relevance and importance criteria for an ACEC.

Response

Section 2.6.2.13 of the Proposed RMP/Final EIS lists moose as a priority wildlife species. Moose are found throughout the planning area in all but alpine habitats. The RMP does not identify site-specific crucial moose habitats across the planning area. Aerial surveys provide some indication of relative density of moose, but at only one time of year (typically late October). Only a small proportion of survey units in a survey area are sampled/observed, and surveys of BLM lands were completed for only small portions of the planning area. Because moose are generally present across the landscape, and the BLM has not identified planning area wide seasonal concentration areas, it is difficult to formulate specific decisions for protection of moose habitat. Certain wetland areas in the region are high-density moose calving habitat, including Tanana Flats and Mosquito Flats. The Proposed RMP (Alternative E) designates portions of Mosquito Flats as an ACEC. Riparian areas are typically high-value moose habitat. Riparian communities are identified as priority plant communities and one wildlife decision directs us to "Avoid or minimize impacts that could degrade riparian areas".

The BLM considered these comments and others in a re-evaluation of the Upper Black River ACEC nomination. We recognize the importance of moose and the upper Black River to area residents. Our determination, however, is that, based on currently available information, the upper Black River watershed area does not meet the importance criteria or need special management for moose. There is limited information available, for this area, but moose collared in eastern Yukon Flats did not move into this area. The migration of moose to Old Crow Flats is documented and is similar to migration of moose in summer to other wetland areas such as Tanana Flats and Minto Flats. Moose undoubtedly calve throughout most of the upper Black River drainage, but concentrated calving in uplands is unlikely. The Proposed RMP (Alternative E) retains the Salmon Fork ACEC proposal and closes it to locatable and leasable minerals, but does not expand it to include upper Black River drainages. The Proposed RMP (Alternative E) also recommends closing some additional watersheds in the Upper Black River Subunit to mining and mineral leasing including the Grayling Fork, Kandik, and lower Black River, which will prevent impacts to moose from mineral extraction in much of the subunit. Additionally, the BLM considers the potential for mineral and other resource extraction in this remote area to be low. A NEPA analysis of any project proposals will consider impacts to moose and mitigation measures. We will consult with tribes on project proposals in the Upper Black River Subunit.

L.4.11.4. Dall Sheep

Comment Number: EIRMP000000157-4, EIRMP000000178-2, EIRMP000000255-1, EIRMP000000163-6, EIRMP000000163-7, and EIRMP000000163-8

Organization: Eastern Interior Federal Subsistence Regional Advisory Council, and U.S. Fish and Wildlife Service

Commenter Type: federal government, advisory committee, and individuals

Summary

Comments voiced concerns about impacts to Dall sheep from mineral exploration in the White Mountains, OHV use in the area near Mt. Schwatka, and habitat fragmentation in the Steese National Conservation Area.

The RMP/EIS should present or discuss Dall sheep horn anomalies and harvest pressure. Also the RMP should include Dall sheep population trend data from Yukon-Charley Rivers Preserve.

Response

In the Proposed RMP (Alternative E) the White Mountains NRA and the Steese National Conservation Area would remain closed to mining and mineral leasing. The Mt. Schwatka area is closed to summer use of OHVs currently. In the Proposed RMP (Alternative E) wildlife management decisions would not preclude, but would limit summer motorized use to maintain Dall sheep habitat effectiveness.

Horn anomaly information added to Chapter 3 Affected Environment. Trend data from Yukon Charley is not necessary for RMP decisions.

L.4.11.5. Predators

Comment Number: EIRMP000000163-9 and EIRMP000000163-10

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The comment suggests sources of:

- bear density and harvest information that could be used in the RMP
- wolf population information for Unit 25D

Response

The BLM appreciates the information about the availability of bear density and harvest information. This information is not necessary for RMP planning purposes. We included wolf population information in Chapter 3 of the Proposed RMP/Final EIS.

L.4.11.6. Migratory Birds

Comment Number: EIRMP000000163-44, EIRMP000000163-56, and EIRMP000000163-45

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The RMP should describe how permitted activities would be conducted in compliance with Migratory Bird Treaty Act and Bald/Golden Eagle Protection Act and what additional protection would bird species of concern would receive, including bald and golden eagles.

Response

Compliance with the Migratory Bird Treaty Act and Bald/Golden Eagle Protection Act will be considered in any permitting decision and, as priority raptor species, SOPs (Appendix A.4) will apply to permitted activities near bald and golden eagle nests.

The Proposed RMP/Final EIS includes protections for bird species of conservation concern (Table 3.17) in several sections. Section 2.6.2.7 Special Status Species describes how sensitive bird species would be protected. Appendix A.4 includes SOPs for priority raptors to protect that class of bird species of conservation concern. Bird species of conservation concern will receive special attention in any proposal to clear vegetation within the May 1 to July 15 time period. As wildlife “priority species”, bird species of conservation concern will be priorities for inventory and monitoring of the species and their habitat, as well as priority for identifying important habitats for these species. In addition, habitats that support several of these bird species of conservation concern, (including riparian and wetland habitats) would be given priority consideration in efforts to minimize impacts and restore habitat quality.

Most areas of high potential golden eagle nesting habitat have been (or will soon be) surveyed. Very few active golden eagles nests have been found on BLM-managed lands in the planning area. SOPs will be followed, and NEPA analyses for specific activities may identify additional mitigation measures. Bald and Golden Eagle Protection Act provisions will be assessed during NEPA analysis. Additional site-specific surveys could be required prior to permit issuance for some activities. The Proposed RMP (Alternative E) limits areas that will be open to locatable and leasable minerals, which limits potential impacts to golden eagles.

L.4.12. Wilderness Characteristics

Comment Number: EIRMP000000152-1, EIRMP000000152-7, EIRMP000000152-2, and EIRMP000000161-15

Organization: Doyon, Limited and Citizen's Advisory Commission on Federal Areas

Commenter Type: Native Corporation and state advisory committee

Summary

- Lands proposed for maintenance of wilderness characteristics under Alternatives B and C will entirely surround Doyon-owned lands and Doyon will require access to these lands. Such access, to which Doyon is entitled under the provisions of ANILCA, could limit BLM's ability to effectively manage the lands to protect their wilderness characteristics.
- Additionally, management of these lands to maintain wilderness characteristics could be used as a basis for the BLM to attempt to deny, or unreasonably condition, access to Doyon's inholdings, frustrating Doyon's and its shareholders' ability to realize the economic development value for which Doyon was permitted to select those lands pursuant to ANCSA.
- Most of these lands are subject to Doyon land selections and are subject to potential conveyance to Doyon, Limited at some time in the future.
- The BLM should manage for wilderness characteristics only within that segment of Birch Creek WSR corridor that lies within the Steese National Conservation Area. Managing for wilderness characteristics in other portions of the Steese could create conflicts between that management strategy and the ANILCA mandate to manage the National Conservation Area "within a framework of a program of multiple use and sustained yield and for the maintenance of environmental quality.

Response

The Proposed RMP (Alternative E) would manage these areas to emphasize other multiple uses while applying management restrictions to reduce impacts to wilderness characteristics. This type of management would not be a basis for the BLM to deny or unreasonably restrict access to Doyon lands. If the lands in question are conveyed, decisions in the RMP would no longer apply. Access to non-federally owned land surrounded by public land will be permitted per ANILCA Section 1323.

The lands referred to in the comment are the Fortymile ACEC, where the BLM management focus will be on caribou and Dall sheep habitat. Proposed management of the ACEC will be sufficient to maintain wilderness characteristics. The Proposed RMP (Alternative E) emphasizes other resource values (caribou and Dall sheep) and multiple uses while applying management restrictions to reduce impacts to wilderness characteristics. The BLM recognizes that there may be some impacts to wilderness characteristics, but we will minimize these impacts through the NEPA process. The size of the ACEC is such that even if an access road went through the area, the polygons on either side of the road will be large enough to meet the criteria for lands with wilderness characteristics. BLM-manual 6310 Conducting Wilderness Characteristics Inventory on BLM lands (C.2.b.iii) states that human impacts outside of the area will normally not be considered in assessing naturalness of an area and (C.3.b) when establishing boundaries of lands with wilderness characteristics do not create a setback or buffer from the physical edge of the imprint of man. Thus a road traversing a large polygon of lands with wilderness characteristics would split the polygon into two smaller units, but would only remove a small amount of land within the footprint of the road from the lands with wilderness characteristics.

Under the Proposed RMP (Alternative E), the BLM will manage Birch Creek WSR corridor, riparian conservation areas, and Primitive, Semi-Primitive, and Backcountry recreation management zones to emphasize other multiple uses while applying management restrictions to reduce impacts to wilderness characteristics (Map 77). Management of these areas is consistent with wilderness characteristics and conflicts are expected to be limited.

L.4.12.1. Management of lands with Wilderness Characteristics

Comment Number: EIRMP000000153B-10, EIRMP000000153B-11, EIRMP000000153B-12, EIRMP000000153C-19, EIRMP000000153C-20, EIRMP000000153C-21, EIRMP000000153D-8, EIRMP000000410-38, and EIRMP000000410-7

Organization: Alaska Wilderness League and cosigners, and Gwichyaa Zhee Gwich'in tribal government

Commenter Type: environmental organization and tribe

Summary

Proposed management for lands with wilderness characteristics in the Draft RMP is insufficient. The BLM is assuming that wilderness characteristics will persist because there is not a lot of use in these areas. This assumption may not hold true for the life of the RMP. Therefore, management should be meaningful and ensure that wilderness characteristics are actually protected. Specific suggestions include:

- Only permit motorboat use with a wake control mechanism.
- Only allow improvement to landing strips if there is a compelling reason why an unimproved landing area is not sufficient and make all efforts to limit impacts to wilderness characteristics.
- Do not allow locatable mineral entry unless the applicant can provide evidence of high resource potential and there are not comparable resources outside of lands managed for wilderness characteristics.
- Only allow construction of new structures or facilities if needed for preservation or enhancement of wilderness characteristics or necessary for the management of other permitted uses.
- Prohibit construction of new roads.

Response

The BLM believes that management for lands with wilderness characteristics is sufficient. The Proposed RMP (Alternative E) would manage 3.5 million acres (more than half of BLM-managed lands in the planning area) to allow for other multiple uses while applying management restrictions to reduce impacts to wilderness characteristics (Maps 73, 77, and 81). These lands include wild and scenic rivers, areas of critical environmental concern, Primitive, Semi-Primitive, and Backcountry recreation management zones, and riparian conservation areas. We will manage these areas in a manner consistent with maintaining wilderness characteristics (naturalness, solitude, opportunities for primitive recreation) over the life of the RMP.

L.4.12.2. Conformance with ANILCA

Comment Number: EIRMP000000161-16 and EIRMP000000170-17

Organization: Citizen's Advisory Commission on Federal Areas and Alaska Department of Natural Resources

Commenter Type: state advisory committee and state government

Summary

Section 2.4.1.11 of the Draft RMP identified activities and uses as "generally incompatible" with maintaining wilderness characteristics, including summer OHV use off designated or existing trails, which is allowed on federal public lands, including designated wilderness, under ANILCA Section 811 for subsistence use where "traditionally employed." Additionally within ANILCA designated areas (Steese National Conservation Area, White Mountains NRA, Birch Creek, Beaver Creek and Fortymile WSR) uses such as snowmachine and motorboat use, aircraft landings, temporary structures for the taking of fish and wildlife and public use cabins should not be subject to any restrictions based on an administrative determination that an area has wilderness characteristics. An administrative policy cannot preempt law. Therefore, the BLM must carefully consider any restrictions that are proposed for the purpose of protecting lands with wilderness characteristics to ensure they do not conflict with congressional intent in ANILCA and DOI ANILCA-implementing regulations.

Response

The BLM has carefully considered restrictions on ANILCA protected uses to ensure that decisions in the RMP do not conflict with ANILCA. We revised the wording in section 2.6.2.11 to remove the list of "generally incompatible" activities. The Proposed RMP (Alternative E) would maintain wilderness characteristics through compatible management of areas of critical environmental concern, wild and scenic rivers, recreation objectives, and riparian conservation areas.

L.4.12.3. Access

Comment Number: EIRMP000000170-36, EIRMP000000411-41, EIRMP000000411-42, EIRMP000000411-43, EIRMP000000411-44, EIRMP000000411-45, EIRMP000000411-46, and EIRMP000000411-47

Organization: Alaska Department of Natural Resources, Alaska Department of Transportation, and Alaska Department of Fish and Game

Commenter Type: state government

Summary

There are unexplored mineral resources in the planning area. It is crucial to maintain access routes to areas with high resource potential because future conditions cannot be predicted. Proposed protections in the Draft RMP for lands with wilderness characteristics will effectively prohibit access, consequently prohibiting development, even if the resource areas technically remain open to development in the RMP. The RMP should consider maintaining access to these energy resources.

Response

The Proposed RMP/Final EIS considered and maintained access options. Rights-of-way would be considered and ANILCA access provisions would apply in all subunits. No right-of-way exclusion areas are proposed under any alternative. Protections, such as those for wilderness characteristics and visual resource management, would not prohibit access but, may increase the level of mitigation required on projects. The Proposed RMP would manage lands to emphasize other resource values and multiple uses, while applying management restrictions to reduce impacts to wilderness characteristics. The purpose of visual resource management is to ensure that scenic values are considered and to minimize those impacts through project design before allowing uses that may have negative visual impacts. Visual resource management classes result from, and conform to, the resource allocations in the RMP.

L.4.12.4. Minerals Management

Comment Number: EIRMP000000153C-22, EIRMP000000153D-9, EIRMP000000194-3, and EIRMP000000170-47

Organization: Alaska Wilderness League and cosigners, Northern Alaska Environmental Center, and Alaska Department of Natural Resources

Commenter Type: environmental organizations and state government

Summary

Some commenters took issue with allowing locatable mineral entry (such as gold mining) on lands with wilderness characteristics. Noting that this activity is generally inconsistent with protecting wilderness characteristics and the BLM has not provided any justification for permitting it. Others noted that it is incompatible to allow leasing or exploring for oil and gas in areas proposed for protection of wilderness characteristics.

Others took issue with the BLM assertion in the Draft EIS that wilderness characteristics would be compromised by oil and gas exploration and development because changes and advancements in oil and gas drilling technologies have greatly reduced the size and severity of surface area disturbances

Response

The Proposed RMP (Alternative E) takes a coincidental approach to management of lands with wilderness characteristics. The BLM is not making decisions to restrict or prohibit certain activities in an area simply to maintain wilderness characteristics. Restrictions or prohibitions are being made to protect some other resource or values (e.g., caribou calving, wild and scenic river corridors, riparian resources, certain types of recreational experiences.) We are recommending these areas be closed to both mining and mineral leasing for reasons other than wilderness characteristics.

L.4.12.5. Authority to Consider Wilderness Characteristics

Comment Number: EIRMP000000023-3, EIRMP000000075-2, EIRMP000000144-1, and EIRMP000000170-16

Organization: Alaska Department of Natural Resources and Fairbanks Chamber of Commerce

Commenter Type: Business Organization, individuals, and state government

Summary

- The BLM has no authority to manage lands specifically to protect "wilderness characteristics" and should not do so. ANILCA Section 1320 specifically exempts BLM lands in Alaska from FLPMA Section 603. The BLM is not allowed to manage lands recommended for wilderness designation to the non-impairment standard and is instead directed to manage in accordance with applicable land use plans. As an apparent substitute for wilderness reviews, which carry this specific limitation in Alaska, the BLM is instead implementing portions of Secretarial Order 3310 as represented in BLM Instruction Memorandum 2011-154 to administratively identify and subsequently protect what it determines are "lands with wilderness characteristics" through the land use planning process. This is nothing more than a creative effort to circumvent the intent behind Section 1320, which limits the manner in which BLM can manage lands that have been recommended for wilderness designation. The BLM should not implement policy direction, which conflicts with congressional intent in both ANILCA and the Wilderness Act. Only Congress can designate wilderness in Alaska, Congress specifically prohibited non-impairment management of BLM lands.

- The BLM proposal to manage large portions of the planning area as closed to multiple use in general and closed to mineral location under the Mining Laws in particular, is effectively managing the lands as "Wilderness Lands." This is in violation of 43 U.S.C. 1784 Lands in Alaska and Bureau of Land Management Land Review section of the Federal Land Policy and Management Act of 1976. That section states that, "Notwithstanding any other provision of law, section 1782" (Bureau of Land Management Wilderness Study) "of the Federal Land Policy and Management Act of 1976 shall not apply to any lands in Alaska."

Response

Management of lands with wilderness characteristics is determined through the land-use planning process, and does not conflict with Section 1320 of ANILCA. As explained by the U.S. Court of Appeals for the Ninth Circuit in *Oregon Natural Desert Association v. BLM*, 531 F.3d 1114 (2008), Section 202 of FLPMA is independent of Section 603 of FLPMA, and requires BLM to rely on resource inventories in the development and revision of land use plans, including inventories of lands with wilderness characteristics. These lands are not new wilderness study areas, conservation-system units, national conservation areas or national recreation areas, and are not managed as such. Like all public lands, they will be managed by the BLM in accordance with land use plans developed under FLPMA and all applicable provisions of law, the arrangement that Congress presumed in ANILCA Section 101(d) when it deemed its "designation and disposition of the public lands in Alaska" to afford "sufficient protection," and represent "proper balance."

Withdrawal of lands from the mining laws is a land use planning decision and is not equivalent to congressional designation of Wilderness. As noted by the commenter, Section 603 of FLPMA does not apply to Alaska nor is the BLM conducting wilderness review under this planning process.

L.4.13. Forest Products

Comment Number: EIRMP000000163B-33, EIRMP000000170B-11, EIRMP000000170B-10, EIRMP000000410-34, and EIRMP000000410-4

Organization: U.S. Fish and Wildlife Service, Gwichyaa Zhee Gwich'in tribal government, and Alaska Department of Natural Resources

Commenter Type: federal government, state government, and tribe

Summary

- As local communities move away from using diesel to using biomass, the demand for forest products will increase. Therefore, it is imperative that multiple use lands have an allowance for commercial timber. Additionally it is unclear if biomass is considered a commercial use or a local use.

- The Draft EIS describes a Free Use Permit concept for harvest of wood products. This concept could lead to conflicts with surrounding landowners and their management regimes. Users may not know where land ownership changes between the BLM and the other landowners. For example, a local wood lot may be located on State lands and subject to different policies. Public misunderstanding of the State's allowable use of cutting dead and down on State lands is a current issue.

- The Tribes urge BLM to preclude commercial forestry activities—including timber sales, salvage sales, and forest products—on all lands throughout the Upper Black River Subunit, especially within the expanded ACEC and RCAs. Allowing commercial logging and other forestry activities in the ACEC and RCAs would be wholly inconsistent with the management objectives of these designations. Moreover, these activities would have serious adverse consequences for the pristine lands and wild resources throughout the Upper Black River Subunit that are essential for sustaining Gwich'in culture, heritage, and subsistence way of life.

Response

The BLM considered the increased interest of rural communities for new biomass fuels to meet increasing fuels needs. Unfortunately little of the BLM-managed lands lie within a reasonably economic distance from these communities. The Proposed RMP (Alternative E) allows for future timber harvest on the majority of the lands in the planning area, but we anticipate little demand on BLM-managed lands.

The BLM authorizes the harvest of forest resources a number of different ways. With the exception of gathering firewood for recreation purposes on-site and the personal collection of Special Forest Products, a permit is required for all other harvest of forest resources. We address and mitigate issues such as land ownership and other resources impacts through the permitting process. Ongoing issues with confusion about land status and permitting differences between the state and the BLM is not a planning issue. We can address these issues now through appropriate coordination between the two agencies.

The Proposed RMP (Alternative E) closes the Salmon Fork ACEC to commercial timber sales, with an exception for salvage sales. Salvage sales allow for removal of wood after a fire or other surface disturbance. The timber in the subunit is not commercially valuable and there is no easy access to remove the timber, making interest in timber sales unlikely. Closing the subunit to all commercial timber and forest product sales, would prevent the villages from harvesting biomass from BLM-managed lands, reducing potential economic opportunities for local residents. Given the long life of the RMP, the need for future management flexibility, and the lack of interest in timber and forest products in the subunit, the BLM does not propose closing the entire Upper Black River Subunit to these uses. The BLM will, however, evaluate all proposals for environmental impacts under NEPA and for impacts to subsistence under Section 810 of ANILCA in consultation with tribes. We will mitigate impacts to the extent possible and the project may be modified to reduce impacts.

L.4.14. Lands and Realty

L.4.14.1. Land Tenure

Comment Number: EIRMP000000170-41, EIRMP000000170-42, EIRMP000000170-43, and EIRMP000000170-49

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

- Written concurrence from the State of Alaska is required under ANILCA Section 906(k) for activities the BLM is proposing in the RMP such as closures to mineral leasing and for designation of right-of-way avoidance areas on State-selected lands.
- Future transfer of state-selected lands may occur. The RMP should not close areas to fluid mineral leasing or designate them as right-of-way avoidance areas until final land title has been resolved.

Response

The BLM is not required to obtain written concurrence from the State of Alaska under section 906(k) of ANILCA for mineral leasing closures and for designation of right-of-way avoidance areas on State selected lands. The law states that State concurrence is required before the Secretary is authorized to make contracts and grant leases, licenses, rights-of-way, or easements. Planning level decisions regarding whether to recommend opening or closing an area to development activities are not the same as granting a right or interest under a contract, lease, license, right-of-way, or easement.

Until the BLM conveys selected lands to the State, the Secretary is free to regulate land use development activities on BLM-managed lands according to applicable laws. Closing BLM-managed lands selected by the State to fluid mineral leasing development or designating right-of-way avoidance areas could impact the State's ability to assess the resource potential of State selected lands and to acquire access.

L.4.14.2. Recordable Disclaimers of Interest

Comment Number: EIRMP000000170-44

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

The ownership of 74 miles of navigable waters and the bed of the Salmon Fork of the Black River has been transferred to the State of Alaska, under a Recordable Disclaimer of Interest (RDI) F-93920, October 24, 2003, and is exempted from lease closures under federal planning. In general, the State asserts ownership of all navigable rivers in this subunit, and across the planning unit under the Submerged Lands Act, 43 U.S.C. 29.

Response

The BLM concurs. As per the RDI (AKFF-093920) issued in 2003, the United States has no interest in the lands described in the RDI, with the exception of those parts of the States application that were described as being "Suspended In-Part". Under the Submerged Lands Act and the Alaska Statehood Act "the State has "the right and power to manage, [and] administer" submerged lands below inland navigable water. BLM-managed lands outside and adjacent to lands below the inland navigable waterways managed by the State will be affected by the Approved Resource Management Plan and managed by the BLM accordingly.

L.4.14.3. R.S. 2477 Rights-of-Way

Comment Number: EIRMP000000094-1, EIRMP000000170B-25, EIRMP000000170B-43, EIRMP000000170B-6, EIRMP000000170B-7, and EIRMP000000200-1

Organization: Alaska Department of Natural Resources

Commenter Type: state government and individuals

Summary

- The RMP does not recognize and identify the State owned Revised Statute (R.S.) 2477 rights-of-way that exist throughout the planning area. The failure to recognize these routes jeopardizes access to private, State, and native lands. Proposed management actions in the RMP should not diminish the State's ability to secure further its rights to R.S. 2477 routes.
- While the BLM may have an internal policy to defer any processing of R.S. 2477 assertions except where there is a demonstrated and compelling need to make a determination, as noted in glossary definition in the RMP, the BLM does not have jurisdiction to defer. R.S. 2477 rights-of-way are a congressional grant and the State owns the right-of-way interest. Therefore, the BLM should conduct non-binding determinations of State claimed R.S. 2477 rights-of-way in the planning area, so that important access routes will not be affected by this plan. Managing the land in the planning area for actual on-the-ground conditions, and not via a document that

fails to consider that such routes exist, is important not just to the State, but also to people who live in and travel to the area.

- Consistent with other Alaska RMPs, the BLM should use the following language to describe R.S. 2477 routes in the textual portion of the plan. The limited definition helps to withstand minor policy changes, and associated divisions and managers within the State have vetted the language: “Under Revised Statute (R.S.) 2477, Congress granted a right-of-way for the construction of highways over unreserved public land. Under Alaska law, the grant could be accepted by a positive act either by the appropriate public authorities or by public use. “Highways” under state law include roads, trails, paths, and other common routes open to the public. Although R.S. 2477 was repealed in 1976, a savings clause preserved any existing R.S. 2477 right-of-way. The State of Alaska claims numerous rights-of-way across federal land under R.S. 2477, including rights-of-way identified in AS 19.30.400. The validity of all R.S. 2477 rights-of-way will be determined on a case-by-case basis and outside of this planning process”.

Response

Until a binding determination on validity of a R.S. 2477 is made, the BLM will continue to provide for and manage access across BLM-managed lands in accordance with the Federal Lands Policy and Management Act of 1976 as well as relevant regulations and policies. The management actions proposed in this RMP in no way diminish the State’s ability to make claims and secure binding determinations on the validity of a valid R.S. 2477 in a court of law.

R.S. 2477 rights are determined through a process that is entirely independent of the BLM’s planning process. The BLM does not consider R.S. 2477 assertions or evidence when doing travel management planning. Travel management planning is founded on an independently determined purpose and need that is based on resource uses and associated access to public lands and waters. When a decision is made on R.S. 2477 assertions the BLM will adjust its travel routes accordingly.

The BLM will consider on the ground routes used by the public in more detail when we develop travel management plans. We will identify, map, and review travel routes within the planning area and use an open and public process to determine management objectives.

Section 1.10 Policy and Legislation uses the language suggested by the State in this comment.

L.4.14.4. Navigability

Comment Number: EIRMP000000096-1, EIRMP000000161-31, EIRMP000000170-49, and EIRMP000000408-15

Organization: Citizen's Advisory Commission on Federal Areas, Alaska Miners Association, and Alaska Department of Natural Resources

Commenter Type: state advisory committee, mining organization, and state government

Summary

- The Draft RMP states: “Until such time a [navigability] determination is made, the BLM presumes ownership of submerged lands.” (p 13) The state acquired title to the beds of navigable waters in 1959. The BLM has made numerous determinations of navigability during the ANCSA land transfer process. The BLM should rely on these and other decisions already made.

- The withdrawals under ANILCA and the Wild and Scenic Rivers Act apply only to the minerals in federal lands that are part of the system and constitute the bed or bank or are situated within one-half mile of the bank of a wild river. In the case of a navigable river, which includes some wild segments of the Fortymile River, the river bed belongs to the State of Alaska. Similarly, the river bed of a navigable segment of a river would not be subject to existing or future withdrawals under the authorities of ANILCA or the WSR Act, neither is State-owned submerged lands or uplands part of the WSR corridor.
- Some navigable waters have been transferred to State ownership. These State selections and transfers of navigable waters directly affect the planning for the proposed Upper Black River Subunit, and legal jurisdictions for the land management proposed.
- State of Alaska management of activities in or on the beds and banks of navigable rivers may not preclude protection of these rivers and watersheds, as is inferred in section 2.4.1.11 of the Draft EIS.

Response

The referenced statement applies to rivers where the BLM has not yet made a navigability determination. We revised the text in the Proposed RMP/Final EIS to clarify.

The BLM concurs that state-owned lands, including the bed of navigable segments of rivers would not be subject to existing or future federal withdrawals.

The RMP recognizes that some rivers in the Upper Black River Subunit have been transferred to the State under recordable disclaimers of interest and that this may limit management options (Sections 2.7.2.2.3.2, 2.7.2.3.3.2, and Appendix E).

The language referenced in this comment was removed from the Proposed RMP/Final EIS.

L.4.14.5. Land Use Authorizations

Comment Number: EIRMP000000152-5 and EIRMP000000170-45

Organization: Doyon, Limited and Alaska Department of Natural Resources

Commenter Type: Native Corporation and state government

Summary

Doyon, Limited disputes the BLM assertion in the Draft EIS that "few rights-of-way" are anticipated over the life of the plan, in part due to their remote location. The proposed Fortymile ACEC is not "remote" from Doyon landholdings or Doyon-selected lands. The Fortymile ACEC would occupy lands selected by Doyon under ANCSA and entirely surround lands that BLM has already conveyed to Doyon. The Draft EIS specifically recognizes that resource development is an important aspect of Doyon's mission. It recognizes that "[c]ontinued oil and gas exploration on Doyon, Limited, lands is likely" and that Doyon "is seeking mining exploration on its lands, especially in the Fortymile Subunit where placer gold claims are encouraged and available, and mineral materials sales would continue (Doyon 2009).

Determination of feasible access and resource transport pipeline routes is not a paper exercise. The BLM must consider numerous factors, and evaluate alternatives to meet both environmental protection and economic feasibility criteria. Proper road and pipeline route siting can significantly reduce negative impacts, and can result in little to no long-term effects. Ice road use can significantly reduce habitat and vegetation impacts. The BLM needs to plan for areas where it will consider and approve pipeline and access rights-of-way on a project-by-project basis.

Response

Chapter 4 Environmental Consequences discusses resource use assumptions for Lands and Realty. Here, the BLM recognizes that demand for land use authorizations, like rights-of-way, would fluctuate with economic growth and development but states that demand would generally be low. Our anticipation of few rights-of-way over the life of the plan is based on historical information regarding the number of land use applications received by the BLM within the planning area over time. NEPA only requires the analysis of activities that are reasonably foreseeable. Reasonably foreseeable actions are those for which there are approved decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends (BLM National Environmental Policy Handbook H-1790-1). Agencies are not required to engage in speculation about future activities.

Given uncertainties regarding final land ownership patterns and where specific site development or access projects will occur within the planning area, the BLM will continue to provide for and manage access across BLM-managed lands on a project specific basis in accordance with the FLPMA as well as relevant regulations (43 CFR 2800) and policies. We will consider impacts of future access in site-specific environmental analyses.

In the Proposed RMP (Alternative E), the Fortymile ACEC is reduced in size and surrounds fewer parcels of Doyon, Limited lands.

L.4.14.5.1. Long Term Camping

Comment Number: EIRMP000000197-1

Commenter Type: individual

Summary

- The BLM should allow temporary camp sites on BLM-managed lands within the Fortymile WSR corridor to support short-term suction dredge mining activities on state mining claims below the ordinary mean high water mark.
- The BLM should not allow long-term camping for commercial purposes in the “wild”, “scenic”, or “recreational” segments of the Fortymile River.

Response

The special rules for the Fortymile Wild and Scenic River Corridor require that a permit be issued for camping associated with commercial activities. The special rules state that "commercial use includes ... activities associated with the use of mechanized equipment for mining...." The BLM would have to change the current special rules before allowing short-term camping associated with suction dredging activities without a permit.

The BLM plans to consider issuing permits for long-term camping on BLM-managed lands as appropriate to reduce and mitigate impacts to WSR values associated with commercial suction dredge activities occurring along inland navigable waterways managed by the State of Alaska.

L.4.14.5.2. Rights-of-Way

Comment Number: EIRMP000000183-1

Organization: Fortymile Miners Association

Commenter Type: mining organization

Summary

The BLM has an excellent trail system in the White Mountains, but this is not the case in the Fortymile. It is very difficult to get help or approval from the BLM to fix an existing roadway. The permittee is asked to pay thousands of dollars permitting fees just to be able to fix the road so it isn’t torn up and it isn't a huge eyesore. Eventually, people just throw their hands up and quit trying.

Response

The White Mountains is a congressionally designated National Recreation Area (NRA) and ANILCA directs the BLM to administer the area for public outdoor recreational use. As such, the BLM strives to fulfill that goal by maintaining a quality trail network for motorized and non-motorized recreational users of the White Mountains NRA, with a particular emphasis on winter use. The BLM does not have a single focused management directive for BLM-managed lands in the Fortymile region. Regardless of the management direction for these two areas; any road or trail use, construction, repair, and maintenance associated with commercial activities on any BLM-managed lands must be permitted in accordance with applicable laws and regulations. The BLM authorizes linear features such as trails and roads using the right-of-way regulations found in 43 CFR 2800. These regulations outline the procedures the BLM must follow when processing right-of-way applications including how cost recovery, rental, and monitoring fees are determined. The regulations also outline when applicants are exempt from paying fees and the process for requesting a fee waiver or reduction from the BLM State Director.

L.4.14.6. Transportation Corridors

Comment Number: EIRMP000000153-59

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

The RMP should prohibit new road corridors because roads are not compatible with the designation and management priorities of the White Mountains NRA or Beaver Creek WSR.

Response

The Proposed RMP (Alternative E) does not identify any new roads or designated transportation corridors into the White Mountains NRA. The only potential for additional roads addressed in the RMP would be associated with leasing in Alternative D, which is not the Propose RMP. The BLM will address improvement to existing trails, routes and proposed designated trails, routes and access areas through the travel management planning process, which includes public scoping and comment. We will analyze any proposals for route construction, primitive or improved through the NEPA process and mitigate impacts to recreation and other resources such that they do not impact the resources for which the White Mountains NRA and Beaver Creek WSR are designated. Additionally, Title XI of ANILCA requires consideration of rights-of-way for Transportation or Utility Systems in wild and scenic rivers, the Steese National Conservation Area and the White Mountains NRA.

L.4.14.7. Right-of-Way Avoidance and Exclusion Areas

Comment Number: EIRMP000000152-6, EIRMP000000410-5, EIRMP000000410-8, and EIRMP000000453-9

Organization: Doyon, Limited, Gwichyaa Zhee Gwich'in tribal government, and Alaska Department of Natural Resources

Commenter Type: Native Corporation, tribe, and state government

Summary

- Where a right-of-way avoidance area is proposed, the RMP should be clear as to the implications of such a proposal and how, if at all, such areas and their implications differ from right-of-way exclusion areas.
- Designation of the Fortymile ACEC as a right-of-way avoidance area, as proposed in Alternative B, could make it more difficult for Doyon, Limited to obtain access to its lands. Effects of this decision could be substantial.
- Allowing transportation corridors in the ACEC and RCAs would be inconsistent with the management objectives of these conservation-oriented designations, and it would facilitate extractive development that threatens pristine lands and wild resources throughout the Upper Black River Subunit that are essential for sustaining Gwich'in culture, heritage, and subsistence way of life. The BLM should establish right-of-way avoidance areas throughout the entire subunit.

Response

The BLM added definitions of right-of-way avoidance and exclusion areas to the glossary. The Proposed RMP (Alternative E) does not include any right-of-way exclusion or avoidance areas.

We revised the analysis in section 4.3.2.2.3 to better reflect potential impacts of a right-of-way avoidance area. An avoidance area does not preclude rights-of-way. It just means that the BLM tries to find alternate sites.

Rights-of-way include more than roads. For example, we issue communication sites (remote radio transmitters) and remote weather monitoring stations under a right-of-way grant. Given the long life of the RMP, the need for management flexibility in the future, and Doyon, Limited, and State inholdings in the Upper Black River Subunit, we do not propose an avoidance area in the Upper Black River Subunit. We will however, evaluate any proposed right-of-way for environmental impacts under NEPA and for impacts to subsistence under Section 810 of ANILCA in consultation with tribes. We will take a hard look at applications under its normal permitting process and consider subsistence resources, requiring mitigation to eliminate or reduce impacts to subsistence resources.

L.4.15. Minerals Management

L.4.15.1. Fluid Leasable Minerals

Comment Number: EIRMP000000156-1, EIRMP000000170-41, EIRMP000000170-42, and EIRMP000000170-43

Organization: Fairbanks Economic Development Corporation and Alaska Department of Natural Resources

Commenter Type: Business Organization and state government

Summary

- The Draft RMP does not explain the mechanisms by which the BLM will permit mineral leasing or if it will ultimately be permitted at all under alternatives B, C, and D.
- Future transfer of State-selected lands may occur; therefore, State-selected acreage should be withdrawn from fluid leasing closures until final land title has been resolved.
- The recommended closure to oil and gas leasing is too restrictive for large expanses of land in the Fortymile and Upper Black River subunits under Alternatives B and C. Particularly near state-selected and private lands near the Salmon Fork watershed and north of the Fortymile Wild and Scenic River to Eagle.

Response

Mineral leasing will be permitted under the Mineral Leasing Act of 1920 (as amended), following BLM regulations in 43 CFR 3000. Leasing would be considered on a case-by-case basis in areas the plan recommends open to leasable minerals if there is interest from industry and if there are no laws, public land orders, or segregations in place that would prohibit leasing. However, Congress has closed some of the lands to leasing through ANILCA. Additionally, public land orders issued under ANCSA 17(d)(1) close most of the lands in the planning area to the mineral leasing laws. Only the Secretary of the Interior or the Assistant Secretary for Lands and Minerals can modify these public land orders. If the BLM conveys lands to another entity the ANCSA withdrawals (public land orders) no longer apply. Applicable laws and regulations pertaining to leasing in the Leasable Mineral Occurrence and Development Potential Report are available online at http://www.blm.gov/ak/eirmp.

The BLM has segregated selected lands from mineral leasing until they are relinquished or the land is transferred. Therefore, these lands remain closed until final land title is established.

The BLM manages for the benefit of all resources. We recommend closures to lands based on scientific research or known resources that need extra protection from surface disturbing activities. The Proposed RMP (Alternative E) recommends closing 4.8 million acres to leasable minerals (Maps 31, 38, and 43). These lands are currently closed by existing public land orders.

L.4.15.1.1. Best Available Information

Comment Number: EIRMP000000170-36, EIRMP000000170-38, EIRMP000000170-39, EIRMP000000170B-24, EIRMP000000410-17, EIRMP000000410-18, and EIRMP000000410-16

Organization: Alaska Department of Natural Resources and Gwichyaa Zhee Gwich'in tribal government

Commenter Type: state government and tribe

Summary

- The BLM should verify the location of the potential oil and gas basins on Map 96 of the Draft RMP with Alaska Department of Natural Resources (ADNR). According to an ADNR-published map dated April 25, 2002, there is a significant oil and gas basin in the north and east portions of the planning area that the BLM has not adequately represented on this map.

- The BLM has not adequately considered the leasable mineral potential in this planning process. The ADNR has identified specific basins and areas with elevated potential in the Upper Black River, Steese, White Mountains, and Fortymile Subunits. This includes U.S. Geological Survey (USGS) depth-mapping from gravity data in the Yukon Flats region (Till, et al., 2006), which identify sub-basins with elevated prospect potential for oil and gas in the Stevens Village and Beaver areas (BLM White Mountains Subunit); in the Birch Creek and Yukon area (BLM White Mountains and Steese Subunits); and, in the Crooked Creek area (BLM Steese Subunit). Geologic mapping and petroleum systems studies (Van Kooten, et al., 1997) show additional petroleum potential in the Kandik and Nation River basins of the Upper Black River and Fortymile Subunits.

- The BLM assumption that oil shale exploration and leasing are unlikely to occur, is based on the lack of information about known occurrences on BLM land at the present time. This should not preclude potential for future exploration and resource identification. It is important that the RMP accommodate responsible access to State, Native, and private lands, and does not preclude oil and gas exploration and development on these lands.

- The BLM dismisses the data showing widespread oil and gas development potential in the Upper Black River Subunit and elsewhere in the planning area as having insignificant impacts on subsistence because "there is no implication that these resources can be developed economically." This is an unreasonable assumption.

Response

Map 96 of the Draft RMP does not show the oil and gas basins. It displays development potential for leasable minerals. The Leasable Mineral Occurrence and Development Potential Report available online at www.blm.gov\ak\eirmp, provides information on the basins as well as their locations relative to the planning area boundaries (and subunits).

The BLM considered and included ADNR information when developing the Leasable Mineral Occurrence and Development Potential Report. We consulted ADNR during development of the mineral potential report.

The BLM assumption that oil shale exploration and leasing is unlikely to occur does not preclude future exploration and resource identification. Existing public land orders and segregations closing these lands to leasing are what preclude it. The Proposed RMP (Alternative E) recommends opening 1.7 million acres to mineral leasing. If the Secretary modifies the public land orders associated with these lands and there is interest from industry, exploration and leasing could occur. The Proposed RMP/Final EIS does not preclude access to State, Native, or private land, nor does it preclude oil and gas exploration or development on these lands.

Opening the Upper Black River Subunit for oil and gas development would not likely spark a lot of interest from industry. As discussed in section 3.3.4.1 the planning area contains portions of two known oil and gas basins. Both basins are considered frontier basins with little substantial data defining an exploitable resource on BLM-managed lands. The part of the Yukon Flats Basin with the most oil and gas potential is located on Yukon Flats National Wildlife Refuge. The USFWS considered and rejected a proposed land exchange with Doyon, Limited that would have allowed for oil and gas exploration on these lands. A small fraction of this basin is near the northern boundary of the White Mountains NRA. Limited seismic exploration and no exploratory drilling have left many questions as to the potential of this basin. The Kandik Basin has not had much exploration either with a total of one well within the basin that yielded no oil or gas shows. The most promising potential is located with the Yukon Charley-Rivers National Preserve (not BLM-managed) with exposures of oil-bearing outcrops. There is no current infrastructure in this area. It is likely that industry would focus their efforts in areas of greater potential and closer to existing infrastructure. All of this information is in the Leasable Mineral Occurrence and Development Potential Report available online at http://www.blm.gov/ak/eirmp.

The BLM did not conduct a Reasonably Foreseeable Development (RFD) Scenario for oil and gas leasing due to the uncertainty of the oil and gas resource and lack of infrastructure within high occurrence potential areas. We believe our assumption is reasonable based on available information.

L.4.15.1.2. Impact Analysis

Comment Number: EIRMP000000153C-27, EIRMP000000153C-33, EIRMP000000170-35, EIRMP000000170-40, EIRMP000000170-47, EIRMP000000170-48, and EIRMP000000312-5

Organization: Alaska Wilderness League and cosigners, and Alaska Department of Natural Resources

Commenter Type: environmental organization, state government, and individuals

Summary

- Restricting activities for access and development along non-contiguous State land and private parcels within the planning area will result in reduced access for exploration, development, and transportation of oil and gas resources on State and Native lands. Impact analysis in the Draft RMP regarding impacts common to all alternatives, notes that the decision to close oil and gas leasing "would have no effect due to the lack of these resources on BLM-managed lands" (Chapter 2, page 208, Alternatives Table). Also discussion about oil and gas leasable resources is missing from Table 2.9.4 Summary of Impacts for the Upper Black River Subunit.

- In 2012, the State legislature enacted the "Middle Earth Tax Credit" to encourage oil and gas exploration in selected highly prospective areas outside the North Slope and Cook Inlet. This tax credit program runs through 2016 and applies to many areas within a 100 mile radius around Fairbanks, including a significant portion of the planning area. It is timely to include reference to the State incentive programs legislated to promote increased exploration and interest in oil and gas resources in the planning area.
- The BLM assumptions about predicted disturbances and negative impacts from oil and gas leasing have not been proven for well-managed lands having resource potential. The State maintains that these assumed outcomes are not the case when permittees use new technologies and effective protections.
- If fracking were to occur in the Kandik basin in the southern portion of the upper Black River that there would be contaminants in the water supply in Black River when it gets to Chalkyitsik.
- In the Draft RMP (p. 423) the BLM says no seismic exploration is expected during the life of this plan, but then goes on to say there may be seismic exploration in the Upper Black River.
- The BLM needs to include a fluid leasable mineral analysis in section 4.3.1.4.1 under Minerals Management.

Response

The Upper Black River Subunit is primarily low occurrence potential for oil and gas based on data used in the BLM Mineral Potential and Occurrence Report. The high potential areas within this subunit are located primarily within the Yukon Charley Rivers National Preserve and on private land, not on BLM-managed lands. The Proposed RMP/Final EIS does not restrict access to State or Native corporation lands. Impacts to leasing in the Upper Black River Subunit are included in Table 2.9.1 Impacts Common to All Subunits.

The Middle Earth Tax Credit does not apply to federal lands and would not directly increase exploration potential on BLM-managed lands.

The BLM stands by the assumptions in the Proposed RMP/Final EIS. The statement about "well-managed lands" with resource potential needs some clarification and a specific example. Even with new technologies, the planning area is still remote and very expensive to explore. The two basins in this RMP have no proven Alaskan resources, with the Kandik Basin showing only a 42 percent probability that it contained at least one accumulation of technically recoverable oil or gas. The three exploration wells drilled in or near the Kandik on U.S. soil contained no oil or gas shows. The Yukon Flats Basin appears to have more potential with the Tertiary Sandstone play containing an 81 percent probability of at least one accumulation of technically recoverable oil or gas. However, the most productive portion of the basin lies within the Yukon Flats National Wildlife Refuge, with the BLM-managed lands on the periphery of the basin. Additionally, neither the Draft or Final EIS analyzes impacts from oil and gas leasing as our assumption is that no leasing would occur.

The BLM does not foresee development of leasable minerals on BLM-managed lands within the Kandik Basin during the life of this plan. Additionally, the RMP does not directly approve such activity. Additional permitting would be required. If the BLM considered permitting this type of activity in the future, we would address the impacts of fracking in a separate impact analysis, which would include public input. If our decision were to allow leasing we would develop appropriate stipulations to mitigate potential impacts to water quality and other resources. Additionally the Proposed RMP (Alternative E) recommends closing lands in the Kandik basin to mineral leasing.

The document says, "Since it is assumed that no leasing, exploration drilling, or development will occur during the life of this plan, there would be no effects to cultural or paleontological resources at this time under any of the alternatives in any subunit. Seismic exploration could occur on high potential lands..."

Seismic exploration is different from exploration drilling. Exploration drilling cannot occur without a lease, and since it is assumed no leasing would occur, primarily due to restrictions from the ANCSA 17(d)(1) withdrawals, the only form of exploration that could occur on open lands is from seismic exploration.

The Proposed RMP/Final EIS addresses effects from leasable minerals to fish and aquatic species in sections 4.4.1.2, 4.5.1.2, 4.6.1.2, and 4.7.1.2.

L.4.15.1.3. Fluid Mineral Leasing Stipulations

Comment Number: EIRMP000000153C-13

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

Within the leasing stipulations, the BLM fails to describe what it means by sufficient snow cover or the allowable types of vehicles or machinery used for exploration.

Response

The BLM will only authorize use of low ground pressure vehicles for exploration, similar to what is used in other parts of the state for winter oil and gas exploration activities. Sufficient snow cover is typically 6 inches with 12 inches of frost. SOP Soils-8 addresses winter overland moves.

L.4.15.2. Solid Leasable Minerals

Comment Number: EIRMP000000139-5, EIRMP000000139-7, EIRMP000000410-19, and EIRMP000000410-33

Organization: Northern Environmental Center and Gwichyaa Zhee Gwich'in tribal government

Commenter Type: environmental organization and tribe

Summary

- Will the BLM open any of the planning area to coal mining or oil shale leasing? None of the maps shows oil shale potential.

- Deferral of coal leasing does not preclude the potential for significant impacts on subsistence to occur at some time during the 20-year planning period, even if they may not occur immediately after the revocation of the withdrawals.

- With respect to oil shale, potassium, sodium, phosphate, and gilsonite, the BLM asserts there are "no known occurrences ... of commercial quantity on BLM lands, thus no exploration or development is anticipated" and "these decisions would have no effect" on subsistence or any other environmental impacts. The absence of "known occurrences" merely reflects a lack of data. It does not demonstrate that such resources do not exist, that their value is too low to justify the cost of accessing them, or that their development would have no impacts on subsistence.

Response

The RMP would not open any lands to coal leasing under any alternative. Depending on the alternative, some lands would be open to coal resource inventory and exploration, and oil shale leasing (section 2.6.3.5.2 Solid Leasable Minerals). There are no known occurrences of oil shale on BLM-managed lands in the planning area, thus there is nothing to display on the maps.

The RMP defers any decisions on opening lands to coal leasing. Coal leasing is deferred because the coal screening process has not been completed. A RMP amendment would be needed before coal leasing could occur. Therefore there would be no effect from this RMP. If in the future, there was interest from industry, and the BLM wanted to consider coal leasing, the coal screening process outlined in 43 CFR 3420.1-4 would be done to determine if the lands are suitable for coal leasing. Then the RMP would need to be amended to allow coal leasing. This amendment would be subject to the planning and decision process laid out in BLM's Land Use Planning Handbook, including analysis of impacts (EA or EIS), section 810 evaluation, public involvement, and opportunity for protest.

Since the BLM is deferring the decision on coal leasing to a future planning effort, the analysis of impacts associated with the decision is also deferred. NEPA only requires the analysis of activities that are reasonably foreseeable. Since an RMP amendment would be required before coal leasing could occur, it is not a reasonably foreseeable activity under the RMP.

The requirement for analysis of impacts under the NEPA is that agencies will make a good faith effort to explain effects that are not known, but are reasonably foreseeable. Reasonably foreseeable actions are those for which there are approved decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends (BLM National Environmental Policy Handbook H-1790-1). Agencies are not required to engage in speculation about future activities. Because there are no known occurrences of these types of minerals in the planning area, it would be speculative for the BLM to discuss impacts from development of these resources in the EIS.

L.4.15.3. Locatable Minerals

Comment Number: EIRMP000000091-1

Commenter Type: individual

Summary

The BLM owns a vast resource of active alluvial and alluvial bench placer deposits in the Fortymile district that were unnecessarily put into wild and scenic river designation. These restrictions should be lifted and individuals and companies should be allowed to commercially mine and recreationally mine these deposits.

Response

Lifting the wild and scenic designation on the Fortymile River is outside of the scope of the RMP. Alternative D analyzes the impacts of opening the scenic and recreational sections of the Fortymile Wild and Scenic River to mineral entry. The Proposed RMP (Alternative E) recommends keeping the Fortymile river corridor closed to new mining claims. Additionally, public land orders issued under ANCSA 17(d)(1) apply to the lands referenced in the comment. These public land orders can only be modified by the Secretary of the Interior or Assistant Secretary for Lands and Minerals.

L.4.15.3.1. Locatable Mineral Potential

Comment Number: EIRMP000000023-4, EIRMP000000023-6, EIRMP000000044-2, EIRMP000000075-3, EIRMP000000075-4, EIRMP000000077-1, EIRMP000000085-3, EIRMP000000094-16, EIRMP000000136-2, EIRMP000000094-18, EIRMP000000082-1, EIRMP000000084-1, EIRMP000000089-3, EIRMP000000023-5, EIRMP000000075-5, EIRMP000000132-1, EIRMP000000085-2, and EIRMP000000170B-1

Organization: Alaska Department of Natural Resources, Alaska Miners Association,

Commenter Type: state government, mining organization, individuals

Summary

- The approach taken by the BLM to catalogue the mineral resources of the planning area was insufficient. Recent reports and data resulting from high quality geoscience and exploration were not even cited or used. Geology and mineral potential do not stop at national borders and the recent discoveries of great new mineral deposits in the Yukon Territories were not factored into the BLM plan. The significance of Rare Earth Elements and Critical and Strategic Minerals to national security is not recognized. Additionally, the BLM study for mineral potential is based on gold and rare earth elements. However, significant discoveries and prospects of other minerals should be considered. For example Full Metal Zinc is exploring part of a zinc-lead-silver district in the Fortymile area and have significant discovery on Doyon land. Many under explored prospects of this type extend onto BLM lands such as in the Black River area. Vanadium, which is on the government critical and strategic minerals list, exhibit the highest assay values in the world (maybe with the exception of Madagascar) in a shale unit which is found on Doyon and BLM lands.

- Much currently available geoscience data were not considered and the USGS, America's experts, were not consulted during development of the Draft RMP. The RMP did not consider open mineral terranes, price fluctuations of commodities, nor current or historic mineral resource data and hypothesis. The Mineral Terranes of Alaska (1982) identified extensive granitic and otherwise mineral favorable terranes for uranium and associated metals including Rare Earths and otherwise strategic elements including tungsten. Although only a small part of any mineral terrane would actually contain an economic prospect, the much larger area needs to remain open for appraisal. The BLM should work in house and with USGS to further define the mineral terranes.

- The USGS has more recent regional geologic map compilations and readily available files of all sediment, rock, concentrate, and soil geochemical sampling from the region. These and newer geologic references should have been used wherever applicable.
- In Alaska, many exploration projects are conducted by Canadian companies. Publicly-traded Canadian exploration companies are required to prepare Technical Reports for exploration projects in accordance with the requirements of National Instrument 43-101 ("NI 43-101 reports"). These reports provide the best contemporary information on the mineralization of individual prospects as well as the regional trends in which the prospects occur. Any professional assessment of the mineral resources and mineral potential of must include data from the NI 43-101 Reports from that area.

Response

Currently available data was considered during development of the Draft RMP and the Locatable Mineral Occurrence and Development Report which is available on line at: www.blm.gov\ak\eirmp. The most complete, up to date, and planning area wide dataset regarding mineral occurrences and development potential is the USGS's Alaska Resource Data Files (ARDF) database. Substantial weight was given to the ARDFs since they provide current and standardized information across subunit boundaries. All ARDFs, and Alaska Mineral Information System (AMIS) sites are based on historic mineral activity. Giving greater weight to documented mineral occurrences and both active and historical mining claims signify acknowledgement of actual mining activities. The 1982 Mineral Terranes maps were used, but were given a lower priority relative to ARDF locations and mining claim. Mineral terranes were also given a lower priority where they had limited access. Metal prices used were averaged over time. Prices did increase from the time of the 2009 analysis.

A complete geologic map is now available for the entire planning area and was considered during development of the Proposed RMP/Final EIS. Regarding regional geochemical sampling, the BLM assumes that the USGS will include significant sediment, rock, concentrate, and soil geochemical anomalies into the ARDF database.

NI 43-101 reports would be a good source for site specific mineral occurrences/deposits, but they are site specific. There is no easy means of searching for NI-43-101 reports geographically. It would be helpful if the commenter identified any specific mineral occurrences that were missed. Due to time and budget constraints the Alaska Resource Data File (ARDF) database was used for the basis of most of the mineral investigations. The ARDF database is the most current and standardized mineral dataset in Alaska. From the ARDF website: "The records in the database are generally for metallic mineral commodities only but also may include certain high value industrial minerals such as barite and rare earth elements." The Eastern Interior Mineral Occurrence and Development Potential Report does not cite every reference used in the ARDFs. The RMP relies on the ARDF to include the latest and most thorough literature review of each quadrangle. Individual sources, where cited, are included in the list of references for the mineral occurrence and potential report. Any bias in research would be created by reliance on the ARDFs. As for mineral potential trends crossing national borders, the trend in mineral occurrences and claim locations in Yukon Territory is carried across the border and through the planning area. If a rare earth mineral occurrence was significant enough to be an ARDF site it was recognized and given consideration. Full Metal Zinc's deposit and surrounding ARDF sites were identified and assessed. These are included in the LWM High Mineral potential area. We are not aware of the High Vanadium assays in the Black River area, but we would like to find the reference where it is cited. The Eastern Interior Mineral Occurrence and Potential Development Report is available online at: www.blm.gov/ak/eirmp.

L.4.15.3.1.1. Mineral potential Black River

Comment Number: EIRMP000000149-6, EIRMP000000153C-30, EIRMP000000153C-47, EIRMP000000153C-49, EIRMP000000153E-34, EIRMP000000279-1, EIRMP000000141-11, EIRMP000000141-13, and EIRMP000000312-2

Organization: Alaska Wilderness League, Arctic Audubon, Black River Working Group, and Council of Athabascan tribal governments

Commenter Type: environmental organization, tribes, concern citizen's organization, and individuals

Summary

- The analysis states that under given alternatives 100 percent of the area may be open to mining, however little to no mining will occur in the Upper Black River subunit because of its remote nature, and therefore there will be no impact to subsistence. This logic is flawed. There is no evidence or cases or examples provided in this document that indicate an area opened 100 percent to mineral entry would not be explored or impacted.

- The Draft RMP says that there is very little likelihood of mining occurring in the Black River, but in the same paragraph it says that Doyon has made selections in that area based on mineral occurrences.

- There is no mention of the known distribution of mineral occurrences in the Upper Black River Subunit, information for which is available in the USGS OPEN-FILE REPORT 03-53, Alaska Resource Data File for Black River quadrangle. BLM's assumption of low or no mining potential is incorrect, and in fact there is high risk for serious environmental impact from mining as known occurrences may attract commercial development during the life of this plan. One known occurrence is an outcrop at the base of Pink Bluff about 50 feet from the south bank of the Salmon Fork of Black River, 0.2 mile downstream of the mouth of Runt Creek. Commercial development of this lead and zinc occurrence (within the proposed Salmon Fork ACEC and in close proximity to a potential Wild River designate) would be allowed in both Alternatives C and D. In order to protect fish habitat as well as the outstandingly remarkable values that qualify Salmon Fork for classification under the Wild and Scenic River Act, Alternative B which closes the entire subunit including the Salmon Fork ACEC to locatable minerals is our preferred alternative.

Response

With the relative lack of known mineral occurrences, no current mining claims, no historic mining claim locations, and no mining claims on any open adjacent State or Canadian lands, it is appropriate to assume there would be low interest in locatable minerals if withdrawals were lifted in the Upper Black River Subunit. There is little evidence that the BLM-managed lands in the Black River subunit ever attracted much locatable mineral exploration or development. Pre-withdrawal activity is one of the best indicators of future activity. There is no record of mining claims on BLM-managed lands in the Black River Subunit before the withdrawals were put in place. The next best indication of future locatable mineral activity is the location of mining claims on adjacent state lands. There are no state mining claims on state lands in the area or any substantial activity across the Canadian border. The lack of historic activity or activity on open adjacent lands points toward there being limited future activity on BLM-managed lands if the withdrawals were lifted.

The passages the commenter identifies are contradictory and have been reworded in the Final EIS. It would be better stated that mineral potential may be a factor in land selections by both Native corporations and the State. Also, an area lacking any known mineral deposits, ARDF sites, or substantial mining claim activity is rightly assumed to have lower mineral potential. The lands were open and available for exploration and location into the early 1970s, but there is no evidence of claims being located or other mining activities at that time and there has been little significant minerals related activity on the open lands surrounding the lands since.

The BLM is unaware of any economically viable mineral occurrences in the Upper Black River area. There are a handful of ARDF sites but none of them were specified as having high mineral potential or containing reserves and no significant surface disturbing developments are anticipated during the life of this plan. The ARDF mineral occurrence locations are available in the Eastern Interior Mineral Occurrence and Development Potential Report which can be downloaded from the Eastern Interior RMP website. The referenced mineral occurrence, an isolated gossaneous zone 2 feet wide by 60 feet long in the middle of the Upper Black River Subunit does not have significant mineral development potential and we would not foresee a mining operation developing within the life of this plan. This base metal occurrence is too far from established transportation to be considered to have substantial development potential.

L.4.15.3.1.2. Nick Property

Comment Number: EIRMP000000094-17

Organization: Alaska Miners Association

Commenter Type: mining organization

Summary

The Black River area has geology directly comparable to that of the adjacent Yukon, which contains deposit types and elements not referred to in the Draft RMP. For example, the Nick property (Yukon Minfile #106D092) contains Nickel, Zinc and Platinum Group element mineralization in shales and sedimentary rocks in a geologic formation that extends into Alaska. Similarly, belts of regionally elevated chromium values occur in the Yukon derived from Paleozoic sedimentary basin rocks which extend into Alaska but have not yet been prospected here. The Draft RMP does not acknowledge these belts.

Response

The Nick property is about 200 miles from the Black River area and there is no evidence of exploration or development of any similar occurrences near or in the subunit; neither on surrounding state and native corporation lands nor on adjacent lands in Canada. Any continuity with Canadian deposits would have to be based on documented mineral occurrences or at least mining claims within a reasonable distance from the border. The closest occurrences to the

Black River subunit is an isolated claim block about 17 miles east of the border that contains the Rusty Springs Prospect. That silver and base metal deposit has had limited activity in the last decade. This occurrence does not lend itself to an interpretation of higher mineral development potential within the Black River Subunit.

L.4.15.3.1.3. Mineral Potential Methodology

Comment Number: EIRMP000000094-17

Organization: Alaska Miners Association

Commenter Type: mining organization

Summary

The Alaska Mining Association supports the minerals provisions of Alternatives C and D for the Upper Black River Subunit, to the extent that they provide for all lands in this subunit to be open to access for prospecting, mineral exploration, claim location, and mine development. This is especially appropriate for the Upper Black River because this remote area has seen little exploration using modern exploration methods and technology. The mineral potential of this area remains largely unknown, although the area contains favorable geologic terranes for minerals. These terranes are clearly depicted in the Revised 1987 Mineral Terranes and Selected Mineral Occurrences in the Black River Region.

Response

The mineral potential of the entire planning are is normalized based on available information. The basis of the mineral potential provided in the USBM OFR 87-78 is not on par with other areas where substantially higher quality and quantity of minerals exist. The mineral locations provided in the referenced mineral terrane report are identified in the ARDF dataset. The descriptions provided in the ARDFs do not show that there is minerals industry interest or minerals of such a character to be considered medium potential.

There is little evidence that BLM-managed lands in the Black River subunit ever attracted much locatable mineral exploration or development. Pre-withdrawal activity is one of the best indicators of future activity. There is no record of mining claims on BLM-managed lands in the Upper Black River Subunit before the withdrawals were put in place in the 1970s. The next best indication of future locatable mineral activity is the location of mining claims on adjacent state lands. There are no state mining claims on state lands in the area or any substantial activity across the Canadian border. The lack of historic activity on BLM-managed lands or activity on open adjacent lands points toward there being limited future activity on BLM-managed lands if the withdrawals were lifted.

L.4.15.3.1.4. Tintina Gold Belt

Comment Number: EIRMP000000080-1, EIRMP000000124-2, and EIRMP000000136-3

Commenter Type: individuals

Summary

The planning area truncates a major mineralized belt known as the Tintina Gold Province with active mines to the west and easterly across the Canadian border. This trend continues through the planning area making it highly prospective for economic mineral deposits. The major difference between The Yukon Gold Rush and more Western Alaska Developments and the Eastern Interior is the availability of lands open for mineral exploration.

Response

It would not be unreasonable to declare the entire Tintina Gold Belt as having medium mineral development potential, but the BLM defined criteria of High Potential areas was having known minerals and industry interest. The criterion for Medium Potential was having known minerals or mining industry interest. High mineral potential areas (Map 88) extend from the Canadian Border toward Fairbanks and are outlined where mineral occurrences are located and past activities have taken place.

L.4.15.3.2. Impact Analysis

Comment Number: EIRMP000000153F-8 and EIRMP000000307-1

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

The Draft RMP failed to address indirect or cumulative impacts of a mineral leasing program's new roads or other access routes for commercial mining. Although the RMP estimates that 20 miles of new roads could be constructed for placer mining, these are not shown nor are their effects evaluated; the BLM did not analyze the direct impacts of commercial development of rare earth elements or hardrock mining, including decreased water quality, loss of riparian habitat, stream degradation, fisheries impacts, or noise disturbance to wildlife and recreation.

Response

Both direct and indirect impacts of mining are analyzed in Chapter 4 of both the Draft RMP/EIS and the Proposed RMP/Final EIS and in Chapter 3 of the Supplement to the Draft RMP. For example, impacts from suction dredging and placer mining to fish and aquatic habitats are analyzed in sections 4.3.1.4, 4.4.1.2, 4.5.1.2, and 4.7.1.2 of the Draft RMP/EIS. The BLM does not anticipate any lode mining on BLM-managed lands over the life of the plan. Regarding leasable minerals, exploration would have to occur before there was any thought of development for oil and gas. Exploration is not limited to existing roads, as it can occur during the winter months without road construction. Development level activities are when existing infrastructure would be most useful. However, the BLM does not foresee any development of oil and gas resources over the life of the plan on BLM-managed lands. There is limited to no occurrence of leasable minerals (oil and gas or coal) in the Fortymile Subunit. Additionally, the RMP would not open the area to coal leasing. Impacts from seismic exploration are evaluated for the Steese and Upper Black River subunits. Impacts from hardrock mineral leasing for rare earth minerals was analyzed in the Supplement to the Draft RMP for the White Mountains. The Proposed RMP (Alternative E) does not recommend opening the White Mountains to hardrock mineral leasing.

L.4.15.3.3. Stream Buffers

Comment Number: EIRMP000000153-38, EIRMP000000153B-47, EIRMP000000153D-3, EIRMP000000153D-4, EIRMP000000163-49, EIRMP000000163-83, EIRMP000000163-87, EIRMP000000163B-137, EIRMP000000163B-62, EIRMP000000163B-7, EIRMP000000164-18, EIRMP000000164-22, EIRMP000000164-26, EIRMP000000164-28, EIRMP000000164-32, EIRMP000000164-34, EIRMP000000164-41, EIRMP000000164-45, EIRMP000000164-46, EIRMP000000164-47, and EIRMP000000164-65

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization and federal government

Summary

- The Draft RMP states that riparian stream buffers are effective at protecting aquatic habitat and fish resources. BLM Alaska has required the use of stream buffers on past mining authorizations and also included stream buffers as a method to protect aquatic habitat in the Kobuk-Seward Peninsula and Bay RMPs. Additionally, the Eastern Interior Draft RMP proposes the use of stream buffers to help protect fish and aquatic habitat from the impacts of timber harvest (ROP Forest-2) and to protect sensitive plant communities. Riparian stream buffers serve to minimize instream and riparian disturbance, reduce sediment loads and thus help maintain water quality and fish, aquatic and wildlife habitat. The BLM should consider the application of stream buffers for mining in the Final RMP as a viable mechanism to maintain riparian function and meet the desired conditions identified for fish and aquatic habitat.

- Stream buffers could be applied to lands currently withdrawn from mineral entry without being construed as a "taking" under the Mining Laws. The use of stream buffers would also allow for some mining to take place outside of the buffer thereby meeting BLM's requirement to manage for multiple-use.

- Given the long period of time necessary to rehabilitate stream environments to a level that would meet BLM's desired conditions for Fish and Aquatic Resources (best estimates suggest multiple decades) a buffer of 300 feet should be applied to all streams under all alternatives and compensatory mitigation should (43 CFR 3809.5- Mitigation) be applied in cases involving valid existing rights.

Response

Given the access rights associated with mining claims, stream buffers were not considered the best avenue for limiting the effects of placer mining. The alternatives in the Proposed RMP/Final EIS recommend mineral withdrawal of watersheds rather than buffers. Buffers may be applied on a voluntary basis on valid existing rights. Section 2.6.1 of the Proposed RMP/Final EIS discusses mitigation.

L.4.15.3.4. Management of Mining

Comment Number: EIRMP000000401-2, EIRMP000000223-1, EIRMP000000172-1, EIRMP000000166-1, and EIRMP000000166-2

Organization: Gwichyaa Zhee Gwich'in tribal government, Alaska Wilderness League and cosigners

Commenter Type: tribes and environmental organizations

Summary

If the Upper Black River Subunit was opened to mining, people could stake claims just to establish a hunting camp in the area. This would negatively impact subsistence users. These impacts should be analyzed in the EIS.

Response

Mining claims and the activities on them must be for the purpose of maintaining, prospecting, or developing a valuable mineral deposit. All activities that occur on the claim must be reasonably incidental to mining. Therefore, staking a mining claim to establish a hunting camp is not allowed by law or regulation. Since the BLM does not have the authority to approve illegal activities, it is not appropriate to analyze in the EIS.

L.4.15.3.5. Valid Existing Rights

Comment Number: EIRMP000000126-5

Organization: Fortymile Miners Association

Commenter Type: mining organization

Summary

Both current and proposed management plans contend "nothing in this act shall supersede valid existing rights. Establishing validity [of mining claims] is a 10+ year process. Consequently, the BLM does not recognize valid existing rights in practice as most small miners cannot wait 10 years to commence mining. The inconsistency between mandate and practice is an item of contention that must be resolved.

Response

Valid – existing – rights together refer to a possessory right to the valuable minerals located within a mining claim that was properly located and maintained. Mining claims have valid existing rights if a discovery is made on the claim before the date of a withdrawal and the claim continues to support a discovery. A 1983 Doyon, Limited IBLA decision states that until a discovery of a valuable mineral deposit is proven, an existing right is not yet valid. Until a patent is issued for a mining claim it is federal land and the BLM is obliged to manage it to prevent unnecessary or undue degradation by ensuring it contained a discovery at the time of withdrawal and still contains a discovery to this day.

L.4.15.4. Salable Minerals

Comment Number: EIRMP000000153E-46, EIRMP000000410-35, and EIRMP000000411-35

Organization: Alaska Wilderness League and cosigners, Gwichyaa Zhee Gwich'in tribal government, and Alaska Department of Natural Resources

Commenter Type: environmental organization, tribe, and state government

Summary

- No portion of the White Mountains ACEC should be open to salable minerals. This use is inconsistent with the definition of an ACEC as mineral development does not ‘protect’ or ‘prevent’ prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes as required management practice in an ACEC.

- The Upper Black River Subunit, or at a minimum, the ACECs and RCAs should be closed to salable mineral development because such sales are inconsistent with management objectives of these conservation-oriented designations. Furthermore, these activities would have serious adverse consequences for the pristine lands and wild resources throughout the Upper Black River Subunit that are essential for sustaining Gwich’in culture, heritage, and subsistence way of life.

Response

If the BLM received an application for a mineral material sale in the White Mountains we would analyze impacts from such a sale through the NEPA process. If this analysis determined the impacts were unacceptable, the proposal would be modified to reduce impacts to an acceptable level. We anticipate few if any material sale requests in the White Mountains NRA. The Proposed RMP (Alternative E) does not designate a White Mountains ACEC.

The Proposed RMP (Alternative E) opens the entire Upper Black River Subunit to salable minerals to provide for management flexibility although few, if any, sales are anticipated. Mineral sales are almost always located adjacent to roads and there are no roads in the Upper Black River Subunit. Nor is the BLM aware of any roads proposed for this area. Even in areas with roads, there are few mineral sales on BLM-managed lands as there are ample sand, gravel, and rock resources on State and private lands. We would evaluate any proposed sales for environmental impacts under NEPA and for impacts to subsistence under Section 810 of ANILCA in consultation with tribes. RCA and ACEC values would be considered during this analysis. If this analysis determined the impacts were unacceptable, we would modify the proposal to reduce impacts.

L.4.16. Withdrawals

Comment Number: EIRMP000000161-10, EIRMP000000161-8, EIRMP000000161-11, EIRMP000000161-33, and EIRMP000000161-9

Organization: Citizen's Advisory Commission on Federal Areas and Alaska Department of Natural Resources

Commenter Type: state advisory committee and state government

Summary

- More clarity on the issue of withdrawals is needed in the final RMP and record of decision. The BLM should consider including a separate appendix that address the issue of withdrawals, how existing withdrawals will be handled in the various alternatives, and whether new or additional withdrawals are proposed in one or more of the alternatives. The RMP should clearly identify all existing Public Land Orders in the planning area, including justification for retaining or modifying the existing orders. The plan should stipulate a time frame for withdrawal revocation and an expiration date for withdrawals. In addition, the final RMP needs to clearly map all ANCSA 17(d)(1) withdrawals.

- Section 606 of ANILCA withdraws lands within 1/2 mile of the bed and banks of wild segments of the Fortymile and Birch Creek Wild and Scenic rivers. The RMP does not state which lands within the Wild and Scenic River corridors are not included in the ANILCA section 606 withdrawal. It is not clear if this proposed action to withdraw lands within the Fortymile and Birch Creek corridors represents the retention of the existing withdrawals or a new withdrawal. The final plan should specify the acreage figures for each of the proposed closure areas.

Response

The BLM has added more detailed information on withdrawals to the Proposed RMP/Final EIS. See section 3.3.8, Appendix G and Maps 90-93. Withdrawals under the authority of FLPMA must be renewed every twenty years. Maps of the ANCSA 17(d)(1) withdrawals are available on the BLM Alaska website at www.blm.gov/ak. Specific legal descriptions will be developed when the withdrawals are modified or revoked.

When the final river corridors were designated, they were protracted to the nearest quarter section. As a result, there are parts of the designated river corridors that are more than 1/2 mile from the bed and banks, and thus not covered by the section 606 withdrawals. Public Land Order (PLO) 5179 which withdrew lands within one mile of the beds and banks of the rivers would be retained until such time as a new FLPMA withdrawal that covers any pieces of the designated river corridors that are not withdrawn under section 606 can be enacted. Once this new FLPMA withdrawal is in place, PLO 5179 would be modified or revoked. The Proposed RMP/Final EIS was edited to better delineate specific acreages for closure areas.

L.4.16.1. Revoke ANCSA Withdrawals

Comment Number: EIRMP000000023-2, EIRMP000000044-7, EIRMP000000075-1, EIRMP000000088-1, EIRMP000000094-6, and EIRMP000000045-3

Organization: Alaska Miners Association, Jade North LCC, Fortymile Miners Association, and Citizen's Advisory Commission on Federal Areas, Alaska Department of Natural Resources

Commenter Type: individuals, Industry, mining organizations, state government, and state advisory committee

Summary

The ANCSA 17(d)(1) withdrawals were implemented to enable now-completed Alaska Native land selections or to study lands to be withdrawn from the public domain for conservation purposes. In the latter case, ANILCA established the conservation units. The purpose for these withdrawals no longer exists. Current federal mining claims total approximately 25,000 acres, so BLM-managed lands open to mineral development are a very insignificant (0.0039 percent) percentage of the planning area. In order to meet BLM's multiple use mandate under FLPMA, the RMP should recommend that the ANCSA 17(d)(1) withdrawals be revoked and all remaining lands be opened to mineral entry, claim location, and leasing.

The BLM's 2006 report to Congress recommends maintaining the ANCSA 17(d)(1) withdrawals for the Steese National Conservation Area and the White Mountains NRA "until their existing RMP 's are reviewed and updated to reflect current management objectives." Lifting the ANCSA 17(d)(1) as proposed in Alternative D will provide for a reasonable level of use and development of the resources in these areas while protecting the other values, including recreation and the other purpose for which the areas were designated.

Response

The BLM recognizes that the ANCSA 17(d)(1) withdrawals need modification. The Proposed RMP (Alternative E) recommends partial revocation of ANCSA 17(d)(1) withdrawals on approximately 1.7 million acres (26 percent of BLM-managed lands in the planning area) to open these lands to mineral entry. In areas of critical environmental concern where the RMP determined that additional resource protection is needed, the Proposed RMP (Alternative E) recommends retaining the ANCSA 17(d)(1) withdrawals until a new withdrawal can be put into place under FLPMA. Additionally, congressional withdrawals under ANILCA would remain in the White Mountains NRA, Steese National Conservation Area, and Birch Creek, Beaver Creek, and wild segments of the Fortymile Wild and Scenic River.

L.4.16.2. Retain ANCSA Withdrawals

Comment Number: EIRMP000000055-4, EIRMP000000153-21, EIRMP000000153-37, EIRMP000000153B-5, EIRMP000000164-48, EIRMP000000153F-1, EIRMP000000153F-12, EIRMP000000153F-19, and EIRMP000000254-2

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization, federal government, and individuals

Summary

All ANILCA, ANCSA(d)(1) and other withdrawals should remain in place for the White Mountains NRA, Steese National Conservation Area, Upper Black River area, and Fortymile Subunit, including the Fortymile WSR, to keep them closed to locatable mineral entry and mineral leasing. The BLM does not have adequate information to make sound decisions to alter permanently the future management of this region by allowing mining and mineral leasing. Other reasons cited for retaining closures to mining included: potential for severe adverse impacts to subsistence resources and water quality; incompatibility of mining with public outdoor recreation benefits and conservation values; and the importance of the Washington Creek area for subsistence and trapping area for Eagle residents.

Response

Under the Proposed RMP (Alternative E), the White Mountains NRA and Steese National Conservation Area would be closed to mining and mineral leasing. Additionally, this alternative recommends: Closing the Salmon Fork ACEC, Black River watershed and riparian conservation areas, 1,813,000 acres in the Upper Black River Subunit, to both mining and mineral leasing; and, closing 745,000 acres in the Fortymile Subunit, including the Fortymile WSR corridor in its entirety, to both new mining and mineral leasing. Mining could still occur on valid existing mining claims in closed areas. Retain the ANCSA withdrawals in areas ANILCA withdrawals do not cover until a new withdrawal could be enacted under FLPMA.

The Proposed RMP (Alternative E) would recommend removing ANCSA withdrawals in the Washington Creek area. However, until the Secretary of the Interior acts, this area would remain closed to mining.

L.4.16.3. Retain Withdrawals in White Mountains NRA

Comment Number: EIRMP000000153-63

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

Existing mineral withdrawals should remain in place within the entire White Mountains NRA because if any mining, roads, and other development were allowed, this would greatly reduce public enjoyment. Current withdrawals include: PLO 5180, ANILCA Section 1312(b), the Wild and Scenic Rivers Act.

Response

Section 2.10.2.4.2.7 discusses withdrawal recommendations in the White Mountains. Withdrawals under section 1312(b) of ANILCA and the Wild and Scenic Rivers Act are congressional withdrawals and the BLM does not have the authority to remove them. The BLM would recommend removal of PLO 5180 to remove duplicate withdrawals and simplify the public land record. The White Mountains NRA and Beaver Creek would remain withdrawn from mineral entry and closed to mineral leasing.

L.4.16.4. Retain Withdrawals in Steese National Conservation Area

Comment Number: EIRMP000000153-40, EIRMP000000153D-13, EIRMP000000153D-31, and EIRMP000000161-7

Organization: Alaska Wilderness League and cosigners and Citizen's Advisory Commission on Federal Areas

Commenter Type: environmental organization and state advisory committee

Summary

- The Proposed RMP should retain the ANILCA withdrawal from mining in the Steese National Conservation Area because it is the only National Conservation Area in Alaska; the BLM should prioritize and protect existing uses such as hiking, birding, camping, horseback riding, skiing and responsible OHV use. Based on the information given regarding the downward trend of fish and aquatic species, new mineral entry should not be allowed in the Steese National Conservation Area. Mineral entry is not consistent with the protection of the resources and environmental quality of the National Conservation Area.
- Lifting the ANCSA 17(d)(1) withdrawals in the National Conservation Area will provide for a reasonable level of use and development of the resources in the Steese National Conservation Area while protecting the other values, including recreation and the other purpose for which the areas were designated.

Response

The Proposed RMP (Alternative E) recommends maintaining the ANILCA withdrawals for the Steese National Conservation Area. It also recommends to the Secretary that the ANCSA 17(d)(1) withdrawals (PLOs 5180 and 5179) be removed from the Steese National Conservation Area. These withdrawals are duplicative of the ANILCA withdrawal and thus not necessary. Additionally PLO 5180 does not close the National Conservation Area to location of metalliferous mining claims (such as gold), so its protective effect is limited. Removing the 17(d)(1) withdrawals would clean up the public land record by removing duplicative withdrawals. Lifting the 17(d)(1) withdrawals would not allow for new mining claims in the Steese National Conservation Area as it would remain withdrawn from mining by ANILCA.

L.4.16.5. Retain Withdrawals in Upper Black River

Comment Number: EIRMP000000153C-46, EIRMP000000215-1, EIRMP000000401-3, EIRMP000000402-2, and EIRMP000000402-3

Organization: Alaska Wilderness League and cosigners, Gwichyaa Zhee Gwich'in tribal government

Commenter Type: environmental organization and tribe

Summary

- Gwichyaa Zhee Gwich'in tribal government requests that the ANCSA 17(d)(1) withdrawals remain in place until the BLM: Completes cultural and biological studies (including the Salmon River and the Grayling Fork), proves there are no endangered species or rare plants, and completes an inventory of the fish populations. The use of fish, wildlife and other subsistence resources are the most prevalent uses in the Upper Black River Subunit, relied upon by nearly all residents, and protection of these resources was the highest concern during scoping meetings (Draft RMP/EIS p. 1165). By opening almost the entire area to mineral entry in the Alternative C the BLM is creating a conflict rather than resolving or being responsive to the concerns of the local communities.

- It is premature for the BLM to recommend revocation of the ANCSA withdrawals and opening lands to mineral development. The conveyance of State- and Native-selected lands and the purposes for which those entities use the lands they acquire will have a significant bearing on whether future mineral development is suitable and appropriate on the remaining adjacent BLM lands. An assumption that these lands will remain under BLM management is not a reasonable basis for moving forward with revocation of ANCSA withdrawals.

Response

The Proposed RMP (Alternative E) recommends that ANCSA withdrawals remain in place on 1,813,000 acres in the Salmon Fork ACEC, Black River watershed, and riparian conservation areas (including Grayling Fork) until new withdrawals could be enacted under FLPMA. Also, the Proposed RMP (Alternative E) recommends 547,000 acres be opened to mining. However, only the Secretary of the Interior or the Assistant Secretary for Lands and Minerals can open the area to new mining. Withdrawals would remain in place until the Secretary chose to take action. Additionally, the State selected some of these lands. Selected lands are segregated (closed to) the mining laws. Selected lands would remain closed to mining and leasing until they are conveyed or the selections are dropped.

The BLM assumes that both Doyon, Limited, and the State selected lands primarily for economic development potential, including mineral values and access. Remaining Doyon selected lands in the Upper Black River Subunit (11,000 acres) constitute less than 1 percent of the BLM-managed lands in the subunit and are immediately adjacent to lands already owned by Doyon. The State has currently ranked State-selected lands in the subunit as very low priority for conveyance. The assumption that these lands will likely remain under long-term BLM management is not the basis for recommending revocation of withdrawals.

L.4.16.6. Authority to Retain ANCSA Withdrawals

Comment Number: EIRMP000000161-14 and EIRMP000000412-42

Organization: Citizen's Advisory Commission on Federal Areas and State of Alaska

Commenter Type: state advisory committee, state government

Summary

- The BLM should actively pursue implementation of recommendations made in the record of decision with regard to withdrawals by actively pursuing recommendations with the Secretary of the Interior. In addition, making the lifting of ANCSA (d)(1) withdrawals conditional upon securing new withdrawals for a completely different purpose, is inappropriate and legally questionable.
- ANILCA designated the Fortymile WSR and determined that, subject to valid existing rights, only the wild segments are withdrawn from mining and mineral leasing (Section 606(a)(2)). An administrative decision to retain ANCSA withdrawals that are contrary to ANILCA to enhance protection beyond that provided by both ANILCA and the WSR Act is legally questionable.

Response

For areas the records of decision recommends open to mining, the BLM will recommend that the Secretary of the Interior remove the ANCSA withdrawals. Implementation of the RMP will be contingent upon funding, staffing, and workload priorities. The BLM has determined that retaining ANCSA (d)(1) withdrawals until securing new withdrawals under FLPMA is legally sound.

Although ANILCA withdrew only the wild segments of the Fortymile WSR from mining and mineral leasing, it did not lift the (d)(1) withdrawal or prohibit the imposition of a new FLPMA withdrawal in the recreational and scenic segments. Under the Proposed RMP (Alternative E) the BLM has determined that protection of water quality and river values is warranted in those segments and such withdrawals are in accord with ANILCA and Secretarial withdrawal authorities.

L.4.16.7. Eagle Recreational Withdrawal

Comment Number: EIRMP_supp-0-12051-1, EIRMP000000110-1, EIRMP000000110-2, EIRMP_supp-0-12051-2, EIRMP000000333-7, and EIRMP000000334-4

Commenter Type: individuals

Summary

A few commenters supported retention of the Eagle Recreational withdrawal (PLO 3432). Reasons for retention include the presence of BLM staff in Eagle and a concern that if the BLM transfers these lands to the State of Alaska, they might be included in future state land sale programs. Potential impacts from conveyance included a negative impact on the quality of life for local residents and alteration of the historical nature of the area.

A few commenters gave limited support for modification of PLO 3432 (Eagle Recreation withdrawal) to allow for expansion of the existing gravel pit. Residents recognized a need for good quality gravel in Eagle, but commenters also voiced a desire for additional site-specific input on how the BLM would modify the withdrawal and reclamation standards for the gravel pit.

Response

The Proposed RMP (Alternative E) recommends retention of PLO 3432 with possible modification of the boundary to allow for expansion of the existing BLM gravel pit in Eagle. Local residents appeared supportive of this decision and the State did not indicate a strong interest in gaining title to these lands. The BLM will seek additional public input during the withdrawal modification process.

L.4.17. Recreation

L.4.17.1. Recreation Setting Character

Comment Number: EIDRMP_EM_000000018-1, EIRMP000000055-1, EIRMP000000055-5, EIRMP000000153E-3, EIRMP000000043-2, EIRMP000000153-60, EIRMP000000153-62, EIRMP000000153E-4, EIRMP000000153-46, EIRMP000000153E-1, and EIRMP000000153-60

Organization: Alaska Wilderness League and cosigners

Commenter Type: individuals and environmental organization

Summary

In the White Mountains NRA and Steese National Conservation Area, the RMP should not reduce the extent of areas classified for Primitive and Semi-Primitive recreation. The changes proposed in the Draft RMP reduce the primitive management areas. The Draft RMP does not provide an adequate range of alternatives for recreational management because none of the action alternatives proposes as much area classified as primitive and semi-primitive as under the current plans. These changes and those referenced in Appendix H do not contain any data on existing uses from surveys or other means of addressing these designations. The RMP does not clearly explain the recreation issues that the BLM is addressing through these changes.

Response

The recreational opportunity spectrum has expanded since development of the existing RMPs to include management for primitive forms of recreation in the Backcountry classification. The Backcountry classification provides for management of some motorized trails, but retains a less developed or more primitive recreational facilities. This management is similar to the current management described as primitive in the No Action Alternative (A). Adding a more robust spectrum of recreational opportunities allows the BLM to be more responsive to the updated outcome based recreational studies for the affected areas. The data we used to develop and update the Recreation Setting Character matrix (formally known as Recreational Opportunity Spectrum) are directly related to the Benefits Based Management studies conducted by the University of Alaska Fairbanks (Fix 2007).

L.4.17.2. Special Recreation Management Areas

Comment Number: EIRMP000000170-31, EIRMP000000161-30, and EIRMP000000153F-15

Organization: Alaska Department of Natural Resources, Citizen's Advisory Commission on Federal Areas, and Alaska Wilderness League and cosigners

Commenter Type: state government, state advisory committee, and environmental organization

Summary

- Each proposed special recreation management area (SRMA) includes one or more ANILCA designated unit(s). These ANILCA units were created for various purposes, to provide for certain activities and to protect a range of resources. Recreation was certainly one of the purposes for which these units were created, but it is not the only purpose or, even in the case of the White Mountains NRA, the primary purpose. In addition, the three Wild and Scenic Rivers and the Steese National Conservation Area are components of BLM's National Conservation Lands (also known as the National Landscape Conservation System or NLCS). Adding another administrative designation on top of the existing statutory designations serves no real purpose and may actually detract from the ANILCA mandated purposes for these areas.
- The Fortymile SRMA in Alternative C is roughly one-third the size of the SRMA in Alternative B, reducing the SRMA, without justification by 543,000 acres.

Response

When considering the recreational opportunities and management options, the BLM needs to consider designation of SRMAs. This is first done by assessing the demand for recreation, levels of existing recreational use, and the unique recreational values of the area under consideration. The ANILCA designated areas do coincide with the SRMAs in the current RMPs as well as the Proposed RMP/Final EIS. The ANILCA designation does not meet the land use planning requirement for identifying recreation management areas. The BLM process requires development of recreation objectives and a step down plan to meet those objectives. These objectives should identify the necessary management actions and allowable uses for the recreation management area. We must also consider extensive recreation management areas (none are identified in this RMP) or other lands (undesignated), which do not apply any recreational focus or management objectives.

During the planning process, the BLM must consider a range of reasonable alternatives. The range in acreage for an administrative designation such as the Fortymile SRMA is both reasonable and consistent with this process.

L.4.17.3. Special Recreation Permitting

Comment Number: EIRMP000000333-2

Commenter Type: individual

Summary

The Seventy-mile River area [in the Fortymile Subunit] is incredibly important for guided mushing tours which are really low impact on the land.

Response

This area is not designated as an SRMA but this does not preclude the operation of commercial recreational opportunities. Recreational management in this area will be custodial in nature, however ROWs or other land use permits would be analyzed through the NEPA process to mitigate impacts to the resources in the area.

L.4.17.4. Trapping

Comment Number: EIRMP000000170-22

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

The RMP proposal to prohibit trapping and placement of bait or scents within one-quarter mile of developed sites, including trails, on all lands conflicts with decisions elsewhere in the RMP to allow trapping up to 25 feet from the trail. The one-quarter mile limit excessively restricts trapping and unnecessarily limits trapping opportunities on BLM-managed lands. Furthermore, the Board of Game is the appropriate venue for changes to trapping regulations, not a planning process.

Response

Language in the RMP regarding trapping and placement of bait within one-quarter mile of developed sites was revised to clarify. Trapping and placement of bait or scents restrictions will be consistently applied to a quarter mile or more from developed sites throughout the planning area, with an additional limitation to 25 feet or more off of the developed trails in the White Mountains NRA. This allows for safe passage of all users in all circumstances. The provision for the White Mountains takes into consideration the number of user-created snow trails off the established and well-traversed trail system, and safety issues related to those user-created trails. Trappers can access their trap lines without the use of snowmobiles; this creates fewer opportunities for users to mistake a trail to a trap for an established trail. The BLM can apply restrictions on the placement of traps or bait for the purposes of protecting the safety of public land users near developed recreational sites. These restrictions do not prevent public land users from trapping on public lands.

L.4.18. Travel Management

Comment Number: EIDRMP_EM_000000016-2, EIDRMP_mail_000000007-1, EIDRMP_mail_000000034-1, EIRMP000000161-19, EIRMP000000043-1, EIRMP000000153E-9, EIDRMP_EM_000000018-2, EIDRMP_PM_000000001-2, EIRMP000000153-44, EIRMP000000161-24, EIRMP000000170B-20, EIDRMP_PM_000000014-1, EIDRMP_PM_000000014-2, EIDRMP-1-19611-1, EIRMP000000153F-13, EIRMP000000157-8, EIRMP000000161-23, EIRMP000000170-12, EIRMP000000170B-19, EIRMP_supp-0-12101-5, EIRMP000000171-1, EIRMP000000177-1, EIRMP000000178-1, EIRMP000000396-1, EIRMP000000344-2, EIRMP000000199-2, EIRMP000000198-3, EIRMP000000153E-37, EIRMP000000067-1, EIRMP000000046-2, EIRMP_supp-1-20962-2, EIDRMP-1-20765-2, EIDRMP_mail_000000027-1, and EIDRMP_EM_000000016-1

Organization: Citizen's Advisory Commission on Federal Areas, Alaska Wilderness League and cosigners, Alaska Department of Natural Resources, Eastern Interior Federal Subsistence Regional Advisory Council, Alaska Outdoor Council, and Alaska Outdoor Access Alliance

Commenter Type: state advisory committee, federal advisory committee state government, individuals, recreation access organization, and environmental organization

Summary

There were numerous comments on travel management from various viewpoints.

- The BLM needs to create travel management plans for all areas.
- The BLM does not currently have sufficient data to do travel management planning.
- Weight limits on off highway vehicles proposed in the RMP are too restrictive. Argos and other wider track machines do less damage than wheeled vehicles. There is no evidence to support that Argos or other larger tracked vehicles do more damage than ATVs.
- Current OHV restrictions are working, don't change them.
- The BLM needs to clarify RMP travel terminology and ensure travel maps are consistent.
- Some areas should remain non-motorized. BLM should put a greater emphasis on providing non-motorized trails.
- The BLM should expand the trail system if proposing to limit vehicles to designated trails.
- The BLM should make stronger efforts to maintain designated and marked trails, and prevent increases in unapproved and undesignated trails.
- There is a lot of access to the Fortymile Subunit off the Taylor Highway. The current levels allow for subsistence access; however travel management decisions should consider land ownership patterns to ensure that BLM decisions are consistent with adjacent lands.
- The BLM should delay any recreation management zones or recreational opportunity spectrum determinations until the travel management plan is done.
- Travel management routes need to take into consideration safety and suitable terrain. Some trails are cannot support use in all seasons and some trails lead to increased access in areas that cannot support a higher level of OHV use.
- Current travel routes are not sustainable and have heavy damage. Creating more may mean more damage if all the use is in concentrated on trails.

- Limiting ATV travel to existing or designated routes while allowing off trail game retrieval as proposed by the Draft RMP will not be easily enforceable, cause more user-created trails, and result in trail proliferation.
- Designated trails will hamper hunting access and concentrate hunters camping around trails resulting in conflicts between user groups and increased damage to existing trails.

Response

The BLM has determined that additional data is needed to complete a comprehensive travel management plan for the Fortymile, Steese, and White Mountains subunits including a determination of designated or existing trails. The RMP will designate areas as Open, Limited and Closed to motorized travel activities as part of the land use planning process (43 CFR 8340.0-5(f), (g) and (h). As part of the step down planning process, the BLM will develop comprehensive travel management plans to determine limitations in areas designated Limited. The BLM will implement interim travel limitations in the Proposed RMP (Alternative E) through the supplemental rule process. We will conduct a full public process including publishing a *Federal Register* Notice, holding hearings, and addressing any access issues under ANILCA Title VIII and IX. See section 2.5 ANILCA Access – Implementing Section 811 and 1110(a) of ANILCA.

The travel management planning process will address weight limitations, trail maintenance, terrain, location of trails, and other concerns. It will include a comprehensive look at both motorized and non-motorized recreation opportunities that fit with the recreation setting character matrix (formally known as the recreation opportunity spectrum). The BLM will determine access and use relative to each subunit in the travel management planning process described above including a determination of which trails will be maintained by the BLM.

The maps and language discrepancies have been resolved through technical corrections in the Proposed RMP/Final EIS. We have deferred the final determination of additional routes and/or travel management zones to the travel management planning process as indicated above.

L.4.18.1. Travel Management Black River Subunit

Comment Number: EIRMP000000153C-23, EIRMP000000153C-24, and EIRMP000000161-25

Organization: Alaska Wilderness League and cosigners, and Citizen's Advisory Commission on Federal Areas

Commenter Type: environmental organization and state advisory committee

Summary

Current OHV use in the Upper Black River Subunit is reported as low due to the remoteness of the area; and there are no reported negative impacts from OHV uses in this subunit. There is no need for the BLM to further restrict access this subunit applying OHV weight restrictions unless indicated. The BLM needs to clarify weight limitations for cross-country use in this subunit.

Response

The BLM has completed the proposed travel management plan for the Upper Black River Subunit concurrently with the Proposed RMP/Final EIS (Appendix B). The low level of use, the lack of established trails, and the need for subsistence access provided the rational for a Limited designation with weight and width restrictions to mitigate impacts of OHVs on tundra soils. We have corrected the discrepancies in weight limitation in the Proposed RMP/Final EIS and the proposed travel management plan. We will conduct a full public process including publishing a *Federal Register* Notice, holding hearings and addressing any access issues under ANILCA Title VIII and IX when developing supplemental rules to implement the travel management plan. See section 2.5 ANILCA Access – Implementing Section 811 and 1110(a) of ANILCA.

L.4.18.2. ANCSA 17(b) Easements

Comment Number: EIDRMP_PM_000000019-1, EIRMP000000170B-3, EIRMP000000170B-4, EIRMP000000170B-41, EIRMP000000170B-42, and EIRMP000000170B-5

Organization: Alaska Department of Natural Resources

Commenter Type: state government and individual

Summary

- The BLM states that consideration of ANCSA 17(b) easements is not within the scope of the RMP because they involve decisions that are outside BLM's authority, or are not a required land use planning decision. This is an inaccurate statement as BLM has management authority for all 17(b) easements and is the 'official record' keeper for tracking and ensuring protections, regardless of agency jurisdiction. Not addressing the management of 17(b) easements in this planning process is further problematic because the plan identifies travel management zones, and is considering placing more restrictive land use designations over large areas, while not identifying or analyzing all travel routes within the planning area.

- The public would benefit if the plan provided accurate descriptions of easements and trails; inventorying the status and condition of all easements and trails, and; ensuring that easements are continuous and avoid environmentally sensitive areas. Identification would also reduce trespass issues and assist the public in gaining legal access to public use areas. The RMP should identify and map all trails, 17(b) easements, and R.S. 2477 rights-of-way and analyze potential impacts from the proposed planning decisions.

- How can the BLM assess and determine a travel management plan, or propose areas to restrict access and uses, when all of the travel routes are not known and identified? The actual on-the-ground and legal access requirements need to be assessed before land management changes are made. The BLM is the manager of 17(b) easements, and not knowing where they are located, or how people's use of them may be impacted from actions taken in the RMP, is problematic.

Response

Designation of 17(b) easements is beyond the scope of the RMP. Easement designation occurs as part of the land conveyance process. 17(b) easements will be considered as existing travel routes during travel management planning. The travel management plan does not determine the allowable uses in the easement. These uses are determined during conveyance. Easement management including record keeping and trespass is an ongoing administrative action, not a land use planning decision.

A complete inventory of 17(b) easements is beyond the scope of the RMP, but may be considered during travel management planning. Maps to the detail suggested by the commenter would be more appropriate in the travel management plan or some other publication designed to inform users of the location and limitations on easements.

The planning level decision in the RMP is to set a Limited OHV area designation. Specific limitations (implementation decisions) will be determined through travel management planning. That is the appropriate time to assess legal access requirements. 17(b) easements are displayed on Recreation and Travel Management maps.

L.4.18.3. OHV Use Related to Mining

Comment Number: EIRMP000000170B-5, EIRMP000000170B-4, EIRMP000000170-29, EIRMP000000161-24, EIRMP000000161-20, EIRMP000000126-1, EIRMP000000118-1, EIRMP000000096-5, and EIRMP000000096-4

Organization: Alaska Miners Association, Fortymile Miners Association, Alaska Department of Natural Resources, Citizen’s Advisory Commission on Federal Areas,

Commenter Type: state government

Summary

In the section titled "Rationale," the BLM acknowledges that recreational off-road vehicle use is the leading cause of resource damage; however, throughout the Environmental Consequences analysis in Chapter 4, it is clearly implied that access for existing and future mining activities cause much of the impact. There is no data in the plan to support the conclusion that the already highly regulated use of off-road vehicles in support of prospecting or mineral exploration causes significant resource damage.

Response

The BLM is deferring travel management limitations to travel management plans in the Fortymile, Steese, and White Mountains subunits to allow for more detailed analysis of existing trails, soil condition and impacts associated with casual use. We handle access for mining operations through an authorization process which is subject to NEPA review, not through the planning process. We have reviewed and revised the impact analysis sections in the Final EIS as appropriate.

L.4.18.4. Motorboat Access

Comment Number: EIRMP000000161-26, EIRMP000000170B-23, EIRMP000000411-31, and EIRMP000000170B-2

Organization: Alaska Department of Natural Resources and Citizen’s Advisory Commission on Federal Areas

Commenter Type: state government and state advisory committee

Summary

There are numerous State asserted navigable waterways in the planning area, and until the matter of navigability on individual rivers is determined, use on all rivers (hovercraft and airboats) should remain consistent with state management. The use of hovercraft and airboats is allowed on State waterways. The RMP should allow for the use of motorboats per ANILCA Section 1110(a) on all rivers.

Response

Interim management in the Proposed RMP (Alternative E) does not restrict the use of motorboats, airboats, or hovercraft on any rivers. The BLM's process for implementing restrictions or closures is discussed in Section 2.5 of the Proposed RMP/Final EIS.

L.4.18.5. Victoria Creek Road

Comment Number: EIRMP000000152-8 and EIRMP000000163B-25

Organization: Doyon, Limited and U.S. Fish and Wildlife Service

Commenter Type: Native Corporation and federal government

Summary

The best option for access to Doyon-owned lands in Beaver and Birch Creek may be through Victoria Creek. The BLM should not to foreclose the possibility of such an access route in the Final RMP. The Final EIS should analyze the impacts of this route.

Response

The Proposed RMP/Final EIS does not foreclose the possibility of a road through Victoria Creek. The BLM will consider applications for rights-of-way when received. We will analyze the impacts of proposed rights-of-way through the NEPA process and make a decision to either grant or not grant a right-of-way. We do not consider a road through Victoria Creek to be reasonably foreseeable and thus it was not analyzed in the Final EIS (section 1.5.2 Issues Considered, But Not Analyzed Further).

L.4.19. Special Designations

Comment Number: EIRMP000000170-55

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

Designation of ACECs should not restrict access, transportation corridors, and temporary land uses when the protected wildlife activities do not occur in the geographic locations, i.e., where and during seasons when caribou calving and fish spawning do not occur.

Response

Designation of ACECs would not automatically restrict access and temporary land uses. When applications for such uses are received, the BLM will analyze the impacts of the proposed use on the values of the ACEC through the NEPA process. We will consider seasonality and site-specific conditions during the application process.

L.4.19.1. Research Natural Areas (RNAs)

Comment Number: EIRMP000000153-42 and EIRMP000000153D-33

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

The BLM should consider expanding the acreage for the Big Windy Hot Springs RNA because it is very small (160 acres) and extremely susceptible to disturbances outside of its boundaries. The BLM should consider adopting the boundary in the 1984 Steese Draft RMP for a 12,700-acre RNA.

Response

The BLM considered expanding the Big Windy Hot Springs RNA during development of the Draft RMP/EIS. The area analyzed included the 12,700 acres considered in Alternatives B and C of the 1984 Steese Proposed RMP. The BLM found no need to expand the RNA boundary. Proposed and existing management, RNA and National Conservation Area designations, and the additional protections afforded by its remote location are sufficient to protect the hot springs system. This analysis is included in Appendix C.

L.4.19.2. ACECs in the Black River Subunit

Several entities nominated a 1.5 million acre area in the Upper Black River for designation as an ACEC. The BLM evaluated the area for relevance and importance, and the need for special management. The result of this evaluation was the proposal for a 623,000-acre Salmon Fork ACEC.

L.4.19.2.1. Relevance and Importance Black River ACEC Nomination

Comment Number: EIRMP000000402-4, EIRMP000000401-1, EIRMP000000301-1, EIRMP000000296-2, EIRMP000000300-1, EIRMP000000296-7, EIRMP000000296-4, EIRMP000000296-3, EIRMP000000296-1, EIRMP000000292-1, EIRMP000000254-1, EIRMP000000158-1, EIRMP000000153C-38, EIRMP000000153-31, EIRMP000000141-16, EIRMP000000141-12, EIDRMP_mail_000000030-2, EIRMP000000055-3, EIRMP000000139-9, EIRMP000000141-18, EIRMP000000149-3, EIRMP000000153-25, EIRMP000000153-33, EIRMP000000153-6, EIRMP000000172-2, and EIRMP000000254-3

Organization: Northern Alaska Environmental Center, Council of Athabascan Tribal Governments, Gwichyaa Zhee Gwich'in tribal government, Alaska Wilderness League, Eastern Interior Federal Subsistence Regional advisory committee, and Black River Working Group

Commenter Type: individuals, environmental organization, concerned citizens organization, tribes, advisory committee

Summary

Numerous comments addressed the relevant and important values of the 1.5 million acre Upper Black River ACEC nomination. These included indigenous lands, whitefish, salmon, waterfowl, moose, caribou, timber, berries, and clean drinking water. Some commenters also noted that the area has significant historical and cultural value for the Dronjek Gwich'in as a traditional homeland and refuge during hard times. Participants at a community meeting hosted in Fort Yukon, noted the Upper Black River is an important nesting grounds for bird populations, black ducks in particular.

Comments took issue with the fact that the BLM reduced the original area nominated for ACEC designation, which took in nearly the entire upper watershed of the Black River, to a much smaller area (623,000 acres). According to commenters the smaller ACEC does not encompass all the special values in the area, including fisheries, wildlife, and cultural values and does not protect the headwaters of the Black River.

Response

The BLM recognizes the importance of the Upper Black River area to residents of the Yukon Flats. The BLM evaluated the 1.5 million acres nominated as the Upper Black River ACEC for its relevance and importance (43 CFR 1610.7-2). This evaluation, found that only the lands in the Salmon Fork drainage qualified as an ACEC. Public comment did not provide additional information sufficient to support expansion of the ACEC to the larger area. See Appendix C.

L.4.19.2.2. Special Management Salmon Fork ACEC

Comment Number: EIRMP000000164-53, EIRMP000000279-2, EIRMP000000411-24, and EIRMP000000411-30

Organization: U.S. Fish and Wildlife Service and Alaska Department of Natural Resources

Commenter Type: federal government, state government, and individual

Summary

- Opening the proposed Salmon Fork ACEC to mineral development would not meet BLM Land Use Planning Handbook H-1601-1 requirement to identify management practices and uses, including necessary constraints and mitigation measures with enough detail to minimize the need for subsequent ACEC management plans. In addition, H-1601-1 states that subject to valid existing rights, approval of proposed actions that could degrade the values of the special designation are to be avoided. It appears only alternative B meets the requirements listed in H-1601-1 and recognizes that opening the ACEC to mineral development would constitute a land use that would impair the values for which the ACEC was designated and thus should be avoided.

- The need for special management in the proposed Salmon Fork ACEC for is unclear. The Bald Eagle Protection Act of 1940 provides adequate conservation measures surrounding bald eagle nesting habitat. State law requires permits for activities such as stream crossings or instream work in resident and anadromous fish streams. Aerial surveys for salmon have been conducted of the Black River since 1960, and most flights have observed no salmon, or at most 200 chum salmon. For scale, total Yukon River drainage run size averages 870,000 fall chum salmon.

Response

In the Proposed RMP (Alternative E) the Salmon Fork ACEC is recommended to remain closed to mineral entry. The ANCSA 17(d)(1) withdrawals would be retained until such time as a new withdrawal under FLPMA could be put in place. In alternatives where the ACEC is recommended open to mining, resource values would be protected by implementing standard operating procedures and the mining regulations under 43 CFR 3809.

The Salmon Fork Black River (Salmon Fork) drainage meets the relevance and importance as an ACEC for fish because it contains high quality and diverse fishery resources. The Salmon Fork contains at least eight species of fish including Chinook salmon and a significant run of fall chum salmon. It contains critical spawning and rearing habitat for both anadromous and resident fish species. Aerial surveys performed by ADF&G and BLM estimates escapement of fall chum between 444 and 3,098. Aerial estimates of abundance are always lower than actual escapements even in optimal survey conditions (Barton 1984). Local residents claim coho and fall chum spawn in open water springs found on Kevinjik (slightly upstream of BLM lands)and Tetthaajik Creeks during the late fall. Sheefish use the Salmon Fork for summer feeding and Alt (1987) found evidence that suggests sheefish spawn in the Salmon Fork and there are only 5 known spawning locations in the entire Yukon River drainage. Alt accurately predicted sheefish spawning areas in the upper Nowitna River drainage which has since been documented. The Salmon Fork also contains a very healthy arctic grayling population.

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d) prohibits anyone without a permit from “taking” bald eagles. However, it does not protect bald eagle habitat, other than nests. The special management for bald eagles includes protection of water quality and aquatic habitats.

L.4.19.2.3. Black River ACEC Evaluation

Comment Number: EIRMP000000153C-39, EIRMP000000153C-40, EIRMP000000163B-121, EIRMP000000163B-122, EIRMP000000163B-126, EIRMP000000163B-127, EIRMP000000163B-15, EIRMP000000164-62, EIRMP000000296-5, EIRMP000000410-22, EIRMP000000410-23, EIRMP000000410-25, EIRMP000000410-26, EIRMP000000410-27, and EIRMP000000410-30

Organization: Alaska Wilderness League and cosigners, Gwichyaa Zhee Gwich’in tribal government, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization, federal government, tribes, and individuals

Summary

- The BLM did not take the impacts of climate change and projected impacts to the land, water and wildlife into consideration when evaluating the Black River ACEC nomination.
- The BLM states “little is known of wildlife resources in the area and so impacts are difficult to predict” (Section 4.6.1.7 page 756). The BLM does not have sufficient information about the Upper Black River subunit to deny an ACEC recommendation.
- Subsistence data is lacking for the Upper Black River region that was originally encompassed by the proposed Upper Black River ACEC. The BLM did not provide sufficient rationale for why the proposed Black River ACEC was dismissed when an analysis of cultural resources

and subsistence use was lacking. Data should be collected prior to dismissing this area for consideration as an ACEC (a culturally relevant area).

- A value of the Black River ACEC nomination that the BLM did not recognize was that it is important fish habitat for Chinook salmon which is on BLM "watch list."
- There was no evaluation of scenic values for the Black River ACEC nomination.
- Caribou and moose resource values justify addition of the rest of the proposed Black River drainage into the ACEC.

Response

Projected impacts of climate change were considered as part of the baseline affected environment in the planning area and as such were considered during evaluation of the Upper Black River ACEC nomination.

To designate an ACEC, the BLM must show that the area both meets the relevance and importance criteria (43 CFR 1610.7-2 and requires special management attention (BLM Manual 1613). If there is not enough information to determine relevance and importance, the area does not qualify as a potential ACEC.

An ACEC cannot be designated based on the absence of information. This area can be reconsidered for ACEC designation in future planning efforts as more data becomes available.

The Black River Chinook stock is not on BLM Watch List. Only the Beaver Creek Chinook Stock is a BLM watch species. Appendix C of both the Draft and Proposed RMP recognizes Chinook and other salmonids as a relevant and important value in the Salmon Fork and its tributaries. The Salmon Fork ACEC encompasses the known extent of anadromy on BLM-managed lands in the Upper Black River Subunit.

The BLM has evaluated the ACEC nominations for scenic values in the Proposed RMP/Final EIS. This information was added to Appendix C.

The BLM reevaluated the nominated Black River ACEC following receipt of these comments. Proponents suggested that caribou and moose resource values justify addition of the rest of the Black River drainage. There is not adequate information to conclude that these resources in the portion of the Black River drainage outside of the Salmon Fork met the importance criteria. A very small portion (0.3%) of documented Porcupine caribou general winter range occurs in the area. Although there is very little data about moose population, distribution, or movements in the area, the available information is insufficient to indicate that moose habitat meets the importance criteria. Although the area likely contributes to the regional moose population available for harvest, it is unlikely to support high densities of moose (relative to the regional moose density) except at the local scale (e.g., small rutting concentration areas). Available recent harvest survey data (for 2008-2010) indicates that about 5% of Fort Yukon moose harvest and 34% of Chalkyitsik moose harvest occurs in the harvest reporting subunits that encompassed upper Black River tributaries (only a portion of which is BLM land). This does not support a finding that the moose resource has “more than locally significant qualities”. Finally, neither caribou nor moose resources were determined to require special management.

L.4.19.3. ACECs in the Steese Subunit

Comment Number: EIRMP000000153-51, EIRMP000000153D-32, and EIRMP000000411-28

Organization: Alaska Wilderness League and cosigners and Alaska Department of Natural Resources

Commenter Type: environmental organization and state government

Summary

- Some comments voiced support for designation of the 927,000- acre Steese ACEC proposed in Alternative B, including managing the area as a right-of-way avoidance area and with limitations on OHV use.
- Other comments questioned the need for an ACEC designation as the proposed Steese ACEC is completely within the National Conservation Area, also a part of the BLM's National Conservation Lands, and the need for additional special management is unclear. Because the widespread resource (caribou calving and postcalving) for which the ACEC is being established is limited temporally to a short season, it is unclear why year-round permanent restrictions of any kind are necessary.

Response

The BLM does not recommend designation of the Steese ACEC in the Proposed RMP (Alternative E). Management of crucial caribou and Dall sheep habitat (section 2.8.2.4.7) will protect caribou and Dall sheep habitat (Map 67). Additionally, the entire Steese National Conservation Area will be closed to mineral entry, location, and leasing. Summer OHV use will be limited to trails/routes in crucial habitats, and in the designated migration corridor, OHV use will be limited so as not to affect caribou movements.

L.4.19.4. ACECs in the White Mountains Subunit

Comment Number: EIRMP000000153-58, EIRMP000000153E-43, and EIRMP000000411-27

Organization: Alaska Wilderness League and cosigners and Alaska Department of Natural Resources

Commenter Type: environmental organization and state government

Summary

Comments voiced support for designation of the White Mountains ACEC in the Final RMP to protect vital habitats for sheep and caribou.

Other comments questioned the need for an ACEC designation in the White Mountains given its status as a National Recreation Area. The benefits of an additive ACEC designation are unclear.

Response

The Proposed RMP (Alternative E) does not designate a White Mountains ACEC. Management of crucial caribou and Dall sheep habitat (section 2.10.2.4.1.6) will protect caribou and Dall sheep habitat (Map 67).

Section 403 of ANILCA establishes the White Mountains National Recreation Area. Section 1312 requires the area be managed to provide for public outdoor recreation use and enjoyment. Additional management emphasis is conservation of scenic, scientific, historic, fish and wildlife, and other values contributing to public enjoyment. ANILCA further states that in administering the recreation area, the Secretary may use such statutory authorities available for conservation and management of natural resources as deemed appropriate for recreation and preservation purposes.

L.4.19.5. ACECs in the Fortymile Subunit

L.4.19.5.1. Mosquito Flats ACEC

L.4.19.5.1.1. Relevance and Importance

Comment Number: EIDRMP_mail_000000020-1, EIDRMP_mail_000000021-1, EIRMP000000408-2, EIRMP000000408-4, EIRMP000000408-6, EIRMP000000431-1, EIRMP000000431-2, EIRMP000000431-5, EIRMP000000443-1, EIRMP000000443-3, EIRMP000000447-1, EIRMP000000447-1, EIRMP000000452-10, EIRMP000000452-11, EIRMP000000452-12, and EIRMP000000453-2

Organization: Alaska Department of Natural Resources, Citizen's Advisory Council on Federal Areas, Resource Development Council, Alaska Miners Association, Doyon, Limited Inc.

Commenter Type: individuals, state government, State advisory council, industry, mining association, Native corporation

Summary

- The BLM should consider designating the Mosquito Flats area as an ACEC because of the massive, contiguous and pristine wetlands found there that are so important to many types of wildlife (and those that depend of wildlife resources) from waterfowl to moose. The Mosquito flats are by far the largest area of contiguous wetlands in the surrounding area. Until 2005 it was almost completely pristine undisturbed wetlands. Since that time the area has been degraded by OHV use. It provides critical habitat for waterfowl both as a nesting area and as a resting area for mass amounts of birds migrating through in the spring and fall. It is the largest and most heavily used calving area for moose in all of the Game Management Unit 20E. These are just two of many reasons to protect this area of critical habitat. This area is extremely fragile and easily destroyed. It cannot sustain much if any mechanized travel without suffering significant damage.

- Mosquito Flats ACEC appears unnecessary to address the identified conservation concerns, given that other administrative tools already exist under both state and federal law to manage access and use within these areas. It is unclear why special management is required for these particular species and habitats. The BLM does not provide enough information to assess the values of the areas, the impacts of ACEC designation, or the need for special management.

Response

The BLM evaluated the Mosquito Flats and found that it meets the relevance and importance criteria (43 CFR 1610.7-2) and thus qualifies as a potential ACEC (Appendix C). Designation of the area is included in the Proposed RMP (Alternative E). Appendix C provides rationale for ACEC designation. The impacts are analyzed in Chapter 4.

L.4.19.5.1.2. ACEC Management

Comment Number: EIRMP000000407-1, EIRMP000000408-3, EIRMP000000408-9, EIRMP000000408-10, EIRMP000000408-11, EIRMP000000454-2, and EIRMP000000455-5

Organization: Alaska Outdoor Council, Northern Alaska Environmental Center, individuals

Commenter Type: outdoor access organization, environmental organization, and individuals

Summary

- Ongoing and increasing OHV use is causing damage to the Mosquito Flats wetlands. OHVs are becoming ever more efficient and powerful, making them capable of going further and into more difficult terrain. The long term damage to tundra and wetlands may not be reversible.
- Winter motorized use in Mosquito Flats will not degrade or adversely impact aquatic or wetland habitat during periods of time when streams, groundwater, and terrestrial and plant organisms are frozen or have adequate snow cover. Therefore, the proposed restrictions on winter-motorized use are not justified.
- A specific reason for managing the Mosquito Flats ACEC as Visual Resource Management Class II is not provided. It is unclear how visual impacts relate to the ACECs, the purpose of which is aquatic and wetland habitat protection.
- The proposed Mosquito Flats ACEC would limit summer OHV use by requiring permits. Additional information related to the purpose and need for the proposed limits and how they would be implemented is needed.
- Other than a fearful outlook of the effects of climate change on the wildlife habitat no data has been provided that would show that current management under state regulations, regarding fish and game management as well as access, has caused any loss of sustainability of the natural resource within the ACEC.

Response

The BLM concurs that damage to soils and wetlands in the Mosquito Flat ACEC is of concern. Proposed management in the ACEC would limit summer use of OHVs to prevent such damage.

Winter motorized use would be allowed subject to weight and width limitations.

Relevance and importance evaluations for scenic value were reviewed for the Mosquito Flats ACEC. The area was found to have significant scenic values.

Final travel management decisions have been deferred to a travel management plan. Management prescriptions for the ACEC state no summer OHV travel. Any restrictions will be handled through a public process including publishing a *Federal Register* Notice, holding hearings and addressing any ANILCA access issues.

There is documented resource damage from repeated OHV use in the Mosquito Flats wetlands.

L.4.19.5.1.3. Size of ACEC

Comment Number: EIRMP000000407-3, EIRMP000000420-1, EIRMP000000425-1, EIRMP000000430-1, EIRMP000000439-2, EIRMP000000446-2, EIRMP000000451-1, and EIRMP000000455-4

Organization: Arctic Audubon and Northern Alaska Environmental Center

Commenter Type: individuals and environmental organizations

Summary

Several comments noted that the Mosquito Flats ACEC does not encompass all of the wetlands on BLM-managed lands and that valuable habitats associated with the relevant and important values for the area are excluded.

Response

The Mosquito Flats ACEC boundary was revised to encompass more of the wetlands and to exclude some uplands (Map 63).

L.4.19.5.2. Fortymile ACEC

L.4.19.5.2.1. Relevance and Importance

Comment Number: EIRMP000000408-6, EIRMP000000408-5, EIRMP000000408-4, EIRMP000000411-23, EIRMP000000431-1, EIRMP000000431-2, EIRMP000000431-5, EIRMP000000450-1, EIRMP000000450-4, EIRMP000000452-3, EIRMP000000452-4, EIRMP000000452-5, EIRMP000000452-6, and EIRMP000000457-4

Organization: Alaska Department of Natural Resources, Alaska Miners Association, Doyon, Limited, Citizen's Advisory Council on Federal Areas, Resource Development Council, and Congressional Delegation

Commenter Type: state government, mining organization, Native corporation, state advisory council, industry, and Congressional

Summary

- The Fortymile ACEC appears unnecessary to address the identified conservation concerns, given that other administrative tools exist under both state and federal law to manage access and use within these areas. It is unclear why special management is required for these particular species and habitats. Nor is it apparent why the ACEC needs to be so large. The ACEC does not meet the criteria for an ACEC. The BLM does not provide enough information to assess the values of the areas, the impacts of ACEC designation, or the need for special management.

- The EIS does not provide any indication that resource uses proposed to be restricted (mining and OHV use) are in any way contributing to the degradation of or threatening the existence of identified values.

Response

Based on BLM's evaluation of the area, Fortymile caribou calving habitat meets the criteria to be designated as an ACEC. Appendix C provides rationale for ACEC designation. The impacts of OHV, mining, and other activities on caribou and Dall sheep are analyzed in Chapter 4. See also the *Habitat Needs Assessment for the Fortymile Caribou Herd* (2000), which identifies the calving and postcalving habitats as the most sensitive habitats for the Fortymile herd, and recommends limiting activities in these areas.

Currently, mining and OHV use is very minimal within the proposed Fortymile ACEC. It would therefore be difficult to show that these activities are currently contributing to the degradation of or threatening the existence of identified values. The RMP prescribes management for 20 or more years into the future and seeks to prevent degradation of habitat.

L.4.19.5.2.2. ACEC Management

Comment Number: EIRMP000000152-4, EIRMP000000152-5, EIRMP000000408-8, EIRMP000000439-1, EIRMP000000443-2, EIRMP000000446-1, EIRMP000000453-3, EIRMP000000453-4, EIRMP000000455, EIRMP000000455-3, EIRMP000000408-14, EIRMP000000426-1, EIRMP000000426-3, EIRMP000000450-3, EIRMP000000452-14, EIRMP000000452-7, and EIRMP000000452-8

Organization: Doyon, Limited and Alaska Department of Natural Resources, Northern Alaska Environmental Center, Pew Trust, Alaska Wilderness League, Cook Inlet Regional Corporation, Resource Development Council and Alaska Miners Association

Commenter Type: Native Corporation, state government, industry, mining organization and environmental organizations

Summary

- The Fortymile ACEC would occupy lands selected by Doyon, Limited under ANCSA and entirely surround lands that have been conveyed to Doyon. Additionally, the ACEC encompasses State land and State-selected lands. The BLM's stated intent to retain the ACEC in federal land status is fundamentally inconsistent with the fact that substantial areas of the ACEC are in the process of conveyance or are high priority Native- and State-selected lands that will likely be conveyed. Designation of the ACEC could limit access to and use of Doyon or State lands, depriving Doyon and the State of the ability to realize the economic and historic and cultural values of its lands and resources.

- Designation of the Fortymile ACEC would limit selection opportunities for the Cook Inlet Regional Corporation and deprive it of potentially valuable conveyance acreage owed under ANCSA.

- The adoption of ACECs, without the consideration of existing and future travel routes and needs, will make access in the area difficult, given the complexity of this plan, it’s practically impossible to foresee the on-the-ground consequences. Because travel management has not been fully realized, it is unclear how adjacent landowners will be impacted or how access will be obtained. In fact, in many places it looks like access to non-BLM-managed lands would essentially be blocked if these ACECs were adopted.

- Climate change will negatively affect caribou habitat in the Fortymile, making these areas even more critical for preservation in the future. Stronger management should be applied including: ceasing further conveyances of selected lands within the ACEC, maintaining existing withdrawals from mining and limiting OHV use.

Response

Decisions in the Proposed RMP/Final EIS to retain ACEC lands in federal ownership would not affect the conveyance process, the State's entitlement under the Statehood Act, or Doyon's entitlement under ANCSA. Nor would it prevent Cook Inlet Regional Corporation from selecting lands in the ACEC. These processes are ongoing administrative actions and take precedence over decisions in the RMP.

Decisions in the RMP to retain lands would prevent these lands from being disposed of through FLPMA sale or exchange after conveyances are completed. Designation of the ACEC would not prevent access to inholdings. Regardless of designation or non-designation, applications for access across BLM lands would be evaluated through the NEPA process and appropriate terms and conditions to mitigate impacts to resources would be applied to the permit.

The BLM has determined that there is not enough travel route and trail information to complete comprehensive travel management plans concurrent with the RMP. We have deferred the travel management plans until after the Record of Decision. This will allow time to conduct a full inventory of motorized and non-motorized travel routes. In cases where access is needed for conveyed lands, the BLM will allow access consistent with section 1323 of ANILCA and FLPMA.

The selection and conveyance process is ongoing and not discretionary. The BLM does not have the authority to stop conveying lands. Various levels of management in the ACEC were considered in the Final EIS alternatives.

L.4.19.5.2.3. ACEC Size

Comment Number: EIRMP000000407-5

Commenter Type: individual

Summary

The proposed Fortymile ACEC only protects about 1/3 of the most important calving habitat. Reproduction is the key to restoring this caribou herd and caribou have an affinity to their calving grounds.

Response

In the Proposed RMP (Alternative E), the outer geographic extent of the Fortymile ACEC is based on a polygon which includes more than 50 percent of the calving locations of Fortymile Caribou from 1992-2008. Outside of the ACEC, management of crucial caribou and Dall sheep habitat (section 2.7.2.4.1.6 Wildlife) will protect caribou habitat without an ACEC designation (Map 103). The BLM is only one of several land managers responsible for management of Fortymile Caribou Herd habitat (others include Doyon Limited, National Park Service, and the State of Alaska), and can only affect management on a portion of this habitat.

L.4.19.5.2.4. Effects of Designation on Economy

Comment Number: EIRMP000000457-2

Commenter Type: Congressional Delegation

Summary

Closing the Fortymile ACEC to mineral entry and location would harm Alaska's economy. The Fortymile mining region is one of the more productive in the state and continues to produce gold with 81 separate companies or individuals involved in mining on state and federal lands. The proposed closure will prevent any future assessments or development of new minerals. This action also comes at a time when the State of Alaska's government is facing a $3.5 billion budget deficit, and when unemployment in Alaska is at 6.3 percent. It is accordingly unacceptable to allow a significant opportunity for increased mineral extraction to be curtailed. That is especially the case since mining taxes and mineral rents and royalties are the State's third-leading source of revenue.

Response

Although the Proposed RMP (Alternative E) recommends closing the Fortymile ACEC (362,000 acres) to new mineral entry; it also recommends opening 1,132,000 acres outside of the ACEC that is currently withdrawn. BLM-managed lands in the Fortymile Subunit are withdrawn from mineral entry and location by public land orders issued by the Secretary of the Interior in the early 1970s. Additionally, any lands selected by the State or Native corporations are segregated from mineral entry until the land is either conveyed or the selection relinquished. Approximately 80 percent of the proposed Fortymile ACEC is selected and these selections are expected to remain in place for many years to come. If the higher potential lands are conveyed, they will be available for exploration and development under state mining claims or through the Native corporations. Mineral assessments could occur under a land use permit on selected lands.

There are no royalties on federal mining claims. Nor are there rents or taxes to the State from federal claims.

The BLM estimates that mineral potential on BLM-managed lands within the ACECs is generally low to medium. The State and Native corporations focused their selections on lands with higher mineral potential, thus the higher potential areas have been conveyed out of federal ownership or are likely to be conveyed. Even if all current obstacles to staking of new mining claims were removed, e.g., the Secretary revoked the existing withdrawals and all selected lands were relinquished, the BLM does not anticipate much interest in minerals on BLM-managed lands in these ACECs.

L.4.19.6. OHV Use in ACECs

Comment Number: EIRMP000000411-25, EIRMP000000411-26, EIRMP000000411-28, EIRMP000000411-29, EIRMP000000417-1, EIRMP000000418-1, EIRMP000000420-2, EIRMP000000420-4, EIRMP000000424-1, EIRMP000000449-1, and EIRMP000000453-10

Organization: Alaska Department of Natural Resources and Doyon, Limited

Commenter Type: Native corporation, state government, and individuals

Summary

- The State does not support limiting winter snowmachine travel in the Fortymile, Steese, or Mosquito Flats ACECs because resources of concern are either absent (calving caribou) or will be protected by snow and frozen ground (wetlands).

- BLM already has the authority to limit OHV use to protect resources; an ACEC designation is not necessary to accomplish this.
- The Mitchell Ranch trail is a long established access trail used for fall hunting for caribou and moose in Game Management Unit 20E. The area is used long after moose calving season.
- Rather than banning summer use of ATVs in Mosquito Flats, consider a weight limit. This would limit impacts, but still allow recreational use. The ACEC is a large area to entirely close to summer OHV use.
- A historic R.S. 2477 route runs through the proposed Mosquito Flats ACEC. The BLM has not addressed how designation of the ACEC would affect access through the area.

Response

All alternatives in the Final EIS allow for winter snowmachine use on all lands with reasonable limitations on weight and width. Snowmachines are defined in the glossary.

An ACEC designation may not be necessary to limit OHV use to protect resources. However, limitations on OHV use can be a part of the special management identified for protection of important or relevant values of an ACEC.

The Mitchell Ranch trail is north of the proposed Mosquito Flats ACEC and would not be affected by ACEC designation.

The Mosquito Flats ACEC is set aside to protect critical wetland habitat. There has been documented damage of repeated OHV use in the wetlands. The fragile wetland environment and soil structure cannot recover from repeated OHV use even with minimal weight limitations. Travel will be allowed in winter when impacts on the wetland soils are not an issue. All upland trails outside the ACEC will be open to use.

The Proposed RMP (Alternative E) outlines management prescriptions for ACECs; however the BLM will go through a comprehensive travel management planning process after the Record of Decision. This process will identify existing routes including R.S. 2477 routes and offer public comment period for uses. A determination of restrictions for this route will be made at that time.

L.4.19.7. National Conservation Lands Policy

Comment Number: EIRMP000000153B-4

Organization: Alaska Wilderness League

Commenter Type: environmental organization

Summary

BLM Instruction Memorandum 2009-215 specifically addresses direct conflicts between the enabling legislation for a unit of the National Conservation Lands (also known as National Landscape Conservation System or NLCS) and BLM's broader "multiple use" mandate, then the legislation takes precedence. This Instruction Memorandum clearly affirms that not all uses must be accommodated within the Steese National Conservation Area and other NLCS units; BLM's priority is protecting the highlighted resources.

Response

The BLM concurs that Instruction Memorandum 2009-215 specifically directs that the enabling legislation for National Conservation Lands units takes precedence if there is a conflict. Section 401 of ANILCA established the Steese National Conservation Area for protection of lands within a framework of multiple use and sustained yield and for the maintenance of environmental quality. Special values to be considered include Birch Creek and caribou range. Section 402(b) allows, where consistent with the land use plan, mineral development pursuant to the Mineral Leasing Act, the Materials Act, and the United States Mining Law. The proposed RMP/Final EIS identifies caribou and Birch Creek as the special values for the Steese National Conservation Area and the alternatives protect these values while allowing for a variable range of multiple use.

L.4.19.8. National Natural Landmarks Program

Comment Number: EIDRMP_EM_000000018-3, EIRMP000000153-43, and EIRMP000000153D-18

Organization: Alaska Wilderness League

Commenter Type: environmental organization

Summary

The BLM's efforts to reconsider the Mount Prindle and White Mountains spine area for inclusion in the National Natural Landmarks Program are inadequate and incomplete. The BLM needs to conduct another review of Mount Prindle because this area still retains the values for which it was nominated in the late 1970s. This planning process is the place where such designations should be considered.

Response

Designation of national natural landmarks is not a required BLM planning decision thus it was not addressed in the RMP. The areas of concern are within the White Mountains National Recreation Area and some are also designated as research natural areas. An additional layer of special designation is unnecessary and will not add any additional protections. The process for identifying and designating national natural landmarks can be found on the National Park Service web site online at: http://www.nps.gov.

L.4.19.9. Wild and Scenic Rivers

L.4.19.9.1. Suitability Determinations

Comment Number: EIRMP000000153C-42, EIRMP000000153D-17, EIRMP000000410-36, EIRMP000000410-37, EIRMP000000410-6, EDIRMP_mail_000000037-12, EIDRMP_mail_000000031-2, EIRMP000000402-1, and EIRMP000000170-15

Organization: Chalkyitsik Village Council, Alaska Department of Natural Resources, Alaska Wilderness League and cosigners and Gwichyaa Zhee Gwich'in tribal government

Commenter Type: state government, environmental organization, individuals and tribe

Summary

- The BLM received statements both in support of and in opposition to recommending the Salmon Fork (52 miles) as suitable for designation as a wild and scenic river.
- The Gwichyaa Zhee Gwich'in tribal government requested that the Upper Black, Kandik, Salmon, Grayling and Wood Rivers all be designated as wild and scenic rivers.
- The BLM lacks information about wetlands, rivers, riparian habitats, fish and wildlife in the Upper Black River subunit, yet they determined that only the Salmon Fork had outstandingly remarkable values that would make it eligible for consideration under the Wild and Scenic Rivers Act. Other rivers in the subunit have outstandingly remarkable values and the BLM must conduct the necessary surveys and evaluations before eliminating these rivers from consideration as eligible.
- The Draft RMP provides only weak justifications for its non-suitability determinations for wild and scenic rivers in alternatives B–D. Accordingly, the BLM should recommend designation of the Salmon Fork as "wild" under the Wild and Scenic rivers Act in the Agency Preferred Alternative.
- The rationale cited for not including Big Windy Creek as suitable for designation under the Wild and Scenic rivers Act in alternatives other than B was lack of interest by federal, public, state, tribal, local, or others. This is an inaccurate statement. The Wilderness League and other groups are interested in seeing a "wild" designation for Big Windy Creek.

Response

Within the Upper Black River Subunit, the BLM evaluated twelve rivers (Appendix E, Table E.1) for eligibility including the Black, Little Black, Kandik, and Grayling Fork following the process outlined in BLM Manual 6400 - Wild and Scenic Rivers only the Salmon Fork was found to be eligible. During the eligibility determination process, no outstandingly remarkable values were identified for the Wood River so it was not carried forward in the eligibility process. The Wood River was re-evaluated during development of the Proposed RMP/Final EIS, but was not found to be eligible as no outstandingly remarkable values are known. The determination that a river contains outstanding values is a professional judgment on the part of an interdisciplinary team (BLM Manual 6400 Wild and Scenic Rivers) and does not require new surveys. The BLM did not receive any additional specific information supporting the presence of outstandingly remarkable values on any other rivers in the Upper Black River Subunit during the public comment period.

The Salmon Fork was considered suitable for designation in Alternative B. Congressional designation of rivers as wild and scenic will not occur unless there is widespread support within Alaska for such designation. Since this widespread support does not exist in Alaska, the BLM did not recommend any rivers as suitable in the Alternative C of the Draft RMP or Alternative E of the Proposed RMP.

The BLM does not consider the Salmon Fork as suitable for designation under the Wild and Scenic Rivers Act in the Proposed RMP (Alternative E) although, it is eligible by virtue of being free-flowing and having outstandingly remarkable wildlife values. This will not foreclose the option for the river to be considered for designation in the future. The suitability findings for the Salmon Fork found in Appendix E.1.3 were revised to indicate tribal and environmental group support for designation. The BLM determined: there is not broad public and congressional support for designation; the Salmon Fork is within a proposed ACEC and RCA these designations along with management in the Proposed RMP (Alternative E) are sufficient to protect the outstandingly remarkable river values; and no values would be foreclosed or diminished if the area is not designated as a WSR. Additionally, the Salmon Fork is navigable and as such the bed of the river is owned by the State of Alaska. There is no support from the State or the Alaska congressional delegation for designation of the Salmon Fork as a wild and scenic river. Without such support, designation by congress is highly unlikely. The Salmon Fork was considered suitable in Alternative B so that impacts of designation could be analyzed in the EIS.

The BLM determined that there is not broad public support for designation of Big Windy Creek as a wild and scenic river (Appendix E.1.3). Without broad support from a wide range of entities there is no likelihood of designation by congress. The BLM received numerous comments opposed to designation of any additional rivers as wild and scenic. Big Windy Creek is within the Steese National Conservation Area and in all alternatives, would remain closed to mineral entry, and have a suite of management decisions that would protect the outstandingly remarkable values; no values would be foreclosed or diminished if the area is not designated as a WSR.

L.4.19.9.2. Management of Suitable Rivers

Comment Number: EIRMP000000412-26

Organization: ANILCA Program

Commenter Type: state government

Comment

The Wild and Scenic Rivers Act only provides federal agencies with authority to protect rivers found suitable under a congressionally-directed study pursuant to Section 5(a) of the Act. Since the study conducted in this planning process was not congressionally authorized, the BLM does not have the authority under the Wild and Scenic Rivers Act to protect outstandingly remarkable values (ORVs) associated with non-designated rivers as is implied by proposed management decisions in section 2.6.4.1.

Response

Under section 5(d)(1) of the Wild and Scenic Rivers Act, federal agencies are directed to identify all potential national wild, scenic and recreation river areas when planning for the use and development of water and related land resources, i.e., in the development of resource management plans, and make specific studies and investigations to determine which rivers should be added. Identifying ORVs associated with the river is part of that process. BLM has broad discretionary authority through the FLPMA land use planning process and NEPA to minimize impacts to such river values and avoid decisions or actions that might lead to a determination of ineligibility or nonsuitability.

L.4.19.9.3. Outstandingly Remarkable Values Birch Creek, Beaver Creek, and Fortymile WSRs

Comment Number: EIRMP000000153E-7, EIRMP000000153D-16, and EIRMP000000153F-20

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

- The wild and scenic river review provided no documentation regarding what tribal consultation was done on Beaver Creek outstandingly remarkable values (ORVs).
- The BLM should reconsider their conclusions on ORVs for Birch Creek. Specifically, wildlife should be included as an ORV. Wildlife was noted as a contributing factor to the recreation ORV. Without the wildlife the recreation ORV would be impacted.
- ORVs should be identified for the Fortymile WSR.

Response

Chapter 5 of this document summarizes tribal consultation done on the RMP. The wild and scenic river inventory and proposed outstandingly remarkable values for Beaver Creek was included in the Draft RMP for public input (Appendix E). The tribes did not give the BLM any information regarding outstanding remarkable values on Beaver Creek during consultation or review of the Draft RMP.

Birch Creek was found to have an outstandingly remarkable recreation value based on its unique opportunities for multi-day primitive floating and camping experiences. Although the wildlife contributes, the recreation ORV stands on its own merits. Additionally, the Proposed RMP/Final EIS includes management decisions that will protect wildlife values in the Steese National Conservation Area and Birch Creek.

Outstandingly remarkable values were identified for the Fortymile wild and scenic river. These are listed in Appendix E, section E.2.3, Table 2.8, and section 2.4.3.

L.4.19.9.4. Eligibility Determinations and Navigable Rivers

Comment Number: EIRMP000000170-15

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

The State of Alaska objects to including navigable State-owned rivers (such as the Salmon Fork of the Black River) in any aspect of the wild and scenic river study, including the eligibility phase, without State support.

Response

Where the BLM manages the uplands on State-owned navigable rivers within the planning area, management planning efforts must identify a realistic range of alternatives for all BLM-managed lands. This includes identifying eligible waterways for inclusion to the Wild and Scenic Rivers System and making a determination of suitable rivers to be forwarded to Congress for inclusion in the Wild and Scenic Rivers System, pursuant to section 5(d)(1) of the Wild and Scenic Rivers Act, wherein federal agencies are directed to identify all potential national wild, scenic and recreation river areas when planning for the use and development of water and related land resources. The range of alternatives must include an alternative where some rivers are identified for inclusion and an alternative where no rivers are included. Under the process outlined in BLM Manual 6400 - Wild and Scenic Rivers, the State's willingness and capacity to participate in the preservation and management of a river in the Wild and Scenic Rivers System are among several factors considered by BLM in evaluating suitability for possible inclusion in the System.

L.4.19.9.5. Impact analysis Wild and Scenic Rivers

Comment Number: EIDRMP_mail_000000027-2 and EIRMP000000153E-5

Organization: Alaska Wilderness League and cosigners

Commenter Type: individuals and environmental organization

Summary

The BLM needs to fully integrate various resource management decisions and assessment of impacts ranging from sedimentation from trail crossings of tributary streams to mineral leasing to increased conflicts between users in Wild and Scenic River corridors.

Response

The RMP integrates various resource management decisions. This document amends the Beaver Creek River Management Plan (1983), the Birch Creek River Management Plan (1983) and the Fortymile River Management Plan (1983) by identifying Outstandingly Remarkable Values associated with each river system. These step-down plans will be updated after completion of the RMP to address site specific issues. Specific impacts to Wild and Scenic River values will be addressed through the NEPA process on a project specific basis and must be compatible with these existing plans.

L.4.19.9.6. Amendments to River Management Plans

Comment Number: EIRMP000000153E-6 and EIRMP000000139-12

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

Because the RMP will amend the existing Beaver Creek River Management Plan (BLM and USFWS 1983), the BLM should explain the differences in goals and objectives, management prescriptions and impacts from the changes in the final RMP. Cooperation with the USFWS on the amended river management plan is necessary because it manages the downstream reach of Beaver Creek within Yukon Flats NWR.

Response

This document amends the Beaver Creek River Management Plan (1983), the Birch Creek River Management Plan (1983) and the Fortymile River Management Plan (1983) only by identifying ORVs associated with each river system which were not previously identified. The BLM consulted with the Yukon Flats Refuge Manager on proposed ORVs for Beaver Creek. River management plans will be updated after completion of the RMP and will include cooperation with the USFWS. The RODs will outline in more detail any amendments to the river management plans resulting from decisions in the ROD.

L.4.19.9.7. Relationship to ANILCA

Comment Number: EIRMP000000161-17 and EIRMP000000170-14

Organization: Alaska Department of Natural Resources and Citizen's Advisory Commission on Federal Areas

Commenter Type: state government and state advisory committee

Summary

By definition, a wild and scenic river is a conservation system unit and any study of rivers within the Eastern Interior Planning Area for possible designation is a violation of Section 1326(b) of ANILCA. As such, any wild and scenic river suitability/eligibility review and possible recommendation for designation violates both the letter and the intent of ANILCA and should not be included in the final RMP under any alternative.

Response

Pursuant to section 5(d)(1) of the Wild and Scenic Rivers Act, the BLM is required to consider potential new national wild, scenic and recreation river areas during the resource management plan development process. Section 1326(b) of ANILCA does not preclude the BLM from doing so because resource management plans are not "single purpose" studies.

L.4.20. Subsistence

Comment Number: EIRMP000000153C-49, EIRMP000000213-5, EIRMP000000220-2, and EIRMP000000153C-43

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization and individuals

Summary

Subsistence is not adequately defined and the use of the term does not reflect the depth of community and identity. The plan doesn't provide evidence to support that no impacts are expected. Contradictions appear in the plan; in one section the plan states that there are no impacts to subsistence in the Upper Black River (P. 1165 - 1173, Appendix J ANILCA Section 810 Analysis), but in another section potential impacts are listed (P. 744, 4.6.4.4 Subsistence Upper Black River Subunit Summary).

Response

The depth of the cultural and traditional relationship with resources, often referred to as subsistence-based lifestyle, is discussed in Section 3.2.3. A definition of subsistence is found in Section 3.5.2.3.2. Subsistence, by this definition, is a key set of attitudes that encompass lifestyle, culture and heritage. In Section 3.5.3., subsistence is defined as a traditional way of life and central to customs and traditions of many cultures in Alaska.

The commenter points out possible contradictions between conclusions in the following sections and an appendix to the Draft RMP/EIS. Potential impacts to subsistence uses and resources in the Upper Black River Subunit are listed in the summary section of all alternatives in the Chapter 4, Affected Environment, 4.6.4.4., Subsistence Upper Black River Subunit. Analysis of these potential impacts follows in Section 4.6.4.4.2 through 4.6.4.4.5 and potential impacts are evaluated by each alternative. The findings for these potential impacts range from no to minimal impacts that is, no significant impacts, and are described by alternative and management decision. The rationale for the findings is also described. Appendix J. ANILCA Section 810 Analysis, J.2.3. Evaluation and Finding for the Upper Black River Subunit incorporates by reference, the impact analysis in the Draft RMP/EIS. The findings for the Upper Black River Subunit of no significant restriction to subsistence resources or uses for each alternative in Appendix J are consistent with the analysis in 4.6.4.4.2 through 4.6.4.4.5.

L.4.20.1. Section 810 analysis

Comment Number: EIRMP000000126-4, EIRMP000000402-5, EIRMP000000334-1, EIRMP000000320-2, EIRMP000000320-2, EIRMP000000312-1, EIRMP000000223-1, EIRMP000000153E-30, EIRMP000000153D-30, EIRMP000000153D-29, EIRMP000000153D-28, EIRMP000000153D-27, EIRMP000000153D-26, EIRMP000000153D-25, EIRMP000000153C-54, EIRMP000000153C-53, EIRMP000000153C-52, EIRMP000000153C-51, EIRMP000000153C-48, and EIRMP000000149-6

Organization: Alaska Wilderness League and cosigners, Gwichyaa Zhee Gwich’in tribal government, Fortymile Miners Association, and Council of Athabascan Tribal Governments

Commenter Type: environmental organization, tribes, mining organizations, and individuals,

Summary

- Literature cited in ANILCA Section 810 Analysis concerning impacts from mining in the Steese National Conservation Area is not pertinent to justify further restrictions on mining as it was conducted before 3809 regulations were in place.

- In Appendix J, Upper Black River Subunit analysis of impacts to subsistence from mineral entry is incomplete and fails to determine the true impacts. Analysis must assume mining will occur and clarify development potential. Priority habitat areas and access routes must be identified. Impacts to fish are not evaluated. Protective mechanisms to prohibit mineral entry need to be explained. Required Operating Procedures and Stipulations are not sufficient without buffers for protection and discretionary language weakens them. Information used for Analysis for the Steese National Conservation Area Subunit must be updated as information used is old. Subsistence use maps for Circle are missing. Downstream impacts, including drinking water quality needs to be evaluated.

- BLM's findings in the Section 810 analysis are not consistent with the analysis sections of the Draft EIS. Impact analysis cites impacts to fish, water, and habitat, but the Section 810 analysis finds no impacts to subsistence.

- Gwichyaa Zhee Gwich'in tribal government requests that the BLM reconsider the Section 810 finding for the Upper Black River Subunit.
- BLM's rationale concerning mineral development in the Upper Black River Subunit is undermined by the agency's statement that "[s]hould the amount of oil and gas exploration, anticipated area of potential locatable mineral development, or other land uses expand, this [Section 810] finding may need to be revised to take into account impacts to the subsistence resources and uses that are not mitigated through this plan." Here, BLM expresses an awareness that significant adverse impacts on subsistence could occur if it turns out that the level of mining and oil and gas development exceeds its artificially low expectations. However, the BLM's suggestion that the solution would simply be to revise its no significant impact finding later is inappropriate.

Response

The ANILCA Section 810 Analysis (Appendix J) is a tool to evaluate the impacts of a proposed land use action on subsistence resources and activities. The analysis is not a tool to justify a particular land use action. Analysis of mining alternatives is in Chapter 4.

Analysis in this document is based on the assumptions in the reasonably foreseeable development scenario that locatable mineral potential in the Upper Black River is low (Map 87, Section 4.2.1). The scenario, which was developed by mining geologists, includes the number of anticipated mineral activities for this subunit and projects zero suction dredging, exploration, small-scale or large-scale placer mining operations. The lack of mining activity during the late 1800s and early to mid-1900s in the area further supports the scenario conclusion that no mineral potential exists. See L.4.15.3.2.1.

The Section 810 findings are whether or not there would be significant restrictions on subsistence use. Impacts to water, fish, and habitat do not necessarily lead to a significant restriction.

The BLM considered all comments and reviewed and revised the Section 810 Analysis as appropriate. The finding was still no significant impact in the Upper Black River Subunit.

Analysis in this document is based on the assumptions in the reasonably foreseeable development scenario that leasable mineral development potential in the Upper Black River is low. NEPA only requires the analysis of activities that are reasonably foreseeable. Future federal actions, such as mineral leasing, are subject to future NEPA analysis, government-to-government consultation, and Section 810 analysis and findings.

L.4.20.2. Incomplete and Unavailable Information Subsistence

Comment Number: EIRMP000000045-1, EIRMP000000045-2, EIRMP000000045-4, EIRMP000000153C-50, EIRMP000000153D-21, EIRMP000000153D-22, EIRMP000000153D-23, EIRMP000000153D-24, EIRMP000000153F-6, EIRMP000000166-3, EIRMP000000166-4, EIRMP000000166-5, EIRMP000000166-9, EIRMP000000170-18, EIRMP000000170-19, EIRMP000000170-20, EIRMP000000213-1, EIRMP000000213-7, EIRMP000000214-2, EIRMP000000242-1, EIRMP000000242-2, EIRMP000000274-2, EIRMP000000276-1, and EIRMP000000287-1

Organization: Alaska Wilderness League and cosigners, Tribal Government of Fort Yukon, and Alaska Department of Natural Resources

Commenter Type: individuals, environmental organization, tribe, and state government

- Important subsistence use areas for the Eagle area are missing from the maps. Subsistence use maps have no data for Birch Creek or Circle.
- Description and analysis of potential impacts to subsistence are not provided for Alternative C and D.
- Wildlife goals and decisions in the RMP do not include species other than moose and caribou.
- Under the No Action Alternative, the BLM indicates (Page 101 of the Draft RMP) that subsistence would be managed project by project within the Steese National Conservation Area. Wildlife and fish and aquatic habitats experience cumulative impacts as well as site specific projects. This is approach to subsistence management disregards the full impacts of altered and fragmented habitats on subsistence species.
- The BLM failed to include an evaluation of impacts to subsistence resources in the action alternatives for the Steese Subunit. Nor did the BLM assess impacts to subsistence fisheries for the Fortymile Subunit.
- The subsistence use data for the Upper Black River Subunit are limited in scope and date. Data on the effects of the alternatives on salmon and other populations is lacking.
- The Section 810 analysis fails to analyze the effects of access restrictions on subsistence users.
- Subsistence harvest data collected by the Council of Athabascan Tribal Governments and references on subsistence use in the Upper Black River Subunit are missing from Chapter 3 and impacts on subsistence from mining and oil and gas development are not adequately addressed.
- Impacts on subsistence hunting and gathering from loss of permafrost due to climate change was not addressed.
- Whitefish are an important subsistence resource in the Black River and need to be protected.
- The BLM failed to include an evaluation of impacts to subsistence resources in the action alternatives for the Steese Subunit.

Response

Eagle subsistence use area information provided during the comment period has been added to Chapter 3 of the Final EIS. Use areas for Eagle, Circle, and Birch Creek are discussed in section 3.5.3.3.1. These use areas were not included on the maps because shape file data did not exist for these villages. No additional use areas for Circle and Birch Creek were identified through public scoping or comment periods. Use areas are discussed in Chapter 3.5.3.3.1 based on available published information.

Assumptions for analysis are included in the Proposed RMP/Final EIS (section 4.2.1.3.3). The development potential for leasable minerals was also used in analysis of impacts (Chapter 3 section 3.3.4.1.1). Using USGS data, the development potential is described and concludes that there is little to no oil and gas development potential on BLM-managed lands in the Upper Black River Subunit. Less than two sections of BLM-managed lands in the planning area have high leasable mineral potential (near Circle). The rest of BLM-managed lands have low or no leasable mineral potential based. High leasable mineral potential areas are located in the

Yukon Flats NWR. Potential impacts from leasable minerals to subsistence uses and resources are discussed further in the section 4.6.4.4.

The goals for subsistence are inclusive of all subsistence resources. The goal highlighted in this comment does not exclude other species, but includes moose and caribou as examples of being among the important subsistence resources.

Section 2.6.1.4. Subsistence describes management under Alternative A in the Steese Subunit. Project-specific basis means a request for permit for a land use action. Each of those applications is analyzed for impacts to subsistence including how the proposed action in conjunction with past, present and reasonably foreseeable future actions impacts the resources (cumulative effects). Additionally, an ANILCA Title VIII Section 810 Evaluation and Finding is conducted for each proposed action.

Impacts to subsistence resources in the Steese Subunit are listed by alternative in Table 2.28 and discussed by alternative in sections 4.5.4.4 Subsistence Steese Subunit. Impacts to fish resources are analyzed in depth in section 4.4.1.2. Fish and Aquatic Species Fortymile Subunit and water resources in section 4.4.1.4 Soil and Water Resources Fortymile Subunit. Further impacts are discussed section 4.4.4.4.

An RMP is developed using existing data and new projects to gather data are not required. However, the BLM conducted two aerial salmon spawning surveys and on seven-day fish inventory survey within the Black River Drainage, including the Salmon Fork, during the planning process. Available data on subsistence use and areas are limited. The BLM depends on supplementing existing data through public input at scoping and comment meetings and through the open scoping and comment periods. Using this data, we have updated Map 98 and have included the information in the Final EIS. Two reports on annual harvest of land mammals have been published since release of the Draft RMP/EIS, but no new data on use areas is available. In the Proposed RMP (Alternative E), the Salmon Fork ACEC and Riparian Conservation Areas throughout the Upper Black River Subunit will protect Chinook salmon spawning areas and other areas important for fish. These areas are closed to locatable and leasable minerals, as is the Black River watershed. Impacts to fish and aquatic resources that are common to all alternatives are described in Section 4.3.1.4.1 of the draft RMP and impacts specific to the Upper Black River Subunit can be found in Section 4.6.1.2.

Impacts to subsistence users as a result of access restrictions are analyzed in the Section 810 Analysis for the Proposed RMP/Final EIS, Appendix J.

Two reports on subsistence harvest data collected by Council of Athabascan Tribal Governments have been published since the Draft RMP was published. The information is included in the analysis of the Proposed RMP/Final EIS. Many thesis, journals, articles, and books about the Black River were consulted for development of the Draft RMP but were not cited at the time. The references were reviewed, including any references identified through public comment, for the Final EIS and incorporated where information contributed to the analysis of impacts.

Climate change and permafrost degradation associated with warming climate is discussed in sections 4.3.1.6.1 and 4.3.1.6.2. The effects of melting permafrost are highly variable and depend on the characteristics of the site. Surface hydrology can change, increased erosion may occur, and lakes may initially expand as permafrost degrades, followed by lake drainage. Impacts of climate change on wildlife and wildlife habitat are analyzed in section 4.3.1.12.6. Further discussion of impacts from climate change to subsistence resources is in Appendix J.

Whitefish are recognized in both the Draft and Proposed RMPs as a priority fish species in the Eastern Interior Planning area with priority status for subsistence (Section 2.6.2.3 Table 2.2) and as a stable food source for residence in the Upper Black River Subunit (Appendix J Section J.2.3 Evaluation and Finding for Upper Black River Subunit). Further, the Salmon Fork ACEC offers protection to whitefish, including an important sheefish spawning area (Appendix C.3).

L.4.20.3. Incomplete and Unavailable Information Black River Subunit

Comment Number: EIRMP000000213-3, EIRMP000000149-5, EIRMP000000153-31, EIRMP000000213-2, EIRMP000000293-2, and EIRMP000000312-4

Organization: Alaska Wilderness League and cosigners, Council of Athabascan Tribal Governments

Commenter Type: individuals, environmental organization, and tribes

Summary

Literature cited for subsistence in the Upper Black River Subunit is dated. More data are available on subsistence resource use and areas than was included in the Draft RMP/EIS.

Response

During scoping meetings, the public indicated that new data on subsistence use of land mammals had been collected. The data were not available to the BLM because reports had not been published. Analysis therefore was conducted using existing published or available data. Two technical papers on subsistence harvest of land mammals have been published since the analysis was written (Van Lanen et al 2012 and Stevens and Maracle 2012). Data in these papers supports the analysis that the whole of the subunit is important to subsistence use and further supports data cited for areas of higher use. No new information on use of fisheries resources in the subunit has become available.

Information identified through the comment periods has been reviewed to assure that it was included in the Draft RMP/EIS or if there is new information that would change the analysis. Many of the documents identified by comment authors were used and cited in Chapters 3 and 4 of the Draft RMP/EIS. Clarification or addition of information on subsistence use areas will be included on maps and in document text as appropriate in the Proposed RMP/Final EIS. The importance of the Upper Black River area, including the Salmon Fork, as important to subsistence uses by Chalkyitsik and Fort Yukon is emphasized in Chapter 3, especially in Section 3.5.3.3.1. Subsistence Use Areas, in Appendix J.2.3 of the Draft RMP/EIS. Additionally, the importance of the Chinook salmon spawning area in the Salmon Fork and the contributions to Chinook populations in the Yukon River drainage is a major driver for designation of the Salmon Fork ACEC. Comments have been used to analyze importance and relevance criteria for expansion of the Salmon Fork ACEC to include the Grayling and Wood River, and prescribing additional protections for the area.

L.4.20.4. Goals and Objectives

Comment Number: EIRMP000000170-23

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

The goals for subsistence need to be reworded because the BLM does not have the authority to regulate subsistence harvest.

Response

The goal was reworded as follows: Effectively manage subsistence resources and uses or effectively provide for a subsistence priority.

L.4.21. Traditional Ecological Knowledge

Comment Number: EIRMP000000148-3, EIRMP000000148-4, EIRMP000000149-4, EIRMP000000151-1, EIRMP000000153-19, EIRMP000000153-20, EIRMP000000153-27, EIRMP000000153-35, EIRMP000000153-39, EIRMP000000158-4, EIRMP000000166-4, EIRMP000000206-1, EIRMP000000209-4, EIRMP000000211-1, EIRMP000000212-2, EIRMP000000220-5, EIRMP000000227-1, EIRMP000000296-6, EIRMP000000300-1, EIRMP000000301-2, EIRMP000000372-1, EIRMP000000382-1, EIRMP000000410-28, and EIRMP000000410-31

Organization: Alaska Wilderness League and cosigners, Chalkyitsik Village Council, and Gwichyaa Zhee Gwich'in tribal government

Commenter Type: individuals, environmental organization, and tribe

Summary

- The RMP/EIS lacks inclusion of Traditional Ecological Knowledge.
- Management decisions through the planning process should be deferred until more biological data and Traditional Ecological Knowledge are available for the Upper Black River Subunit.
- The BLM should manage areas in the Upper Black River for traditional and current uses in support of local people and their subsistence use of the area.

Response

Local and traditional knowledge was gathered during scoping meetings and included in the analysis of impacts in the Draft RMP/EIS. Knowledge shared during the public comment period on the Draft RMP/EIS, at Section 810 hearings, and during government-to-government consultation was and resulted in updates to impact analysis in the Proposed RMP/Final EIS.

Although there are data gaps, enough information is available to make a reasoned choice among alternatives. The Upper Black River Subunit is included in this Proposed RMP/Final EIS. No decisions will be made until the record of decision is published.

The BLM appreciates the concerns of local residents and considered these concerns in development of the Proposed RMP/Final EIS. The BLM through FLPMA manages for multiple uses. Traditional and current uses are considered part of the multiple uses we manage. Protection of resources is considered in all land use actions. Where land use actions have impacts, measures to mitigate them are implemented through the NEPA process. If it is determined through the

ANILCA Section 810 evaluation and finding process that impacts may significantly restrict subsistence uses or resources even after mitigation is applied, the law requires disclosure of those findings through an ANILCA Section 810 public hearing. Tribes and local residents will have the opportunity to provide input during this process. The BLM will continue to consult with tribes on any permitted activities in the Upper Black River Subunit.

The BLM recognizes the importance of the Upper Black River area to residents of Yukon Flats. The Proposed RMP (Alternative E) designates the Salmon Fork drainage (623,000 acres) as an ACEC. Like Alternative B, it identifies 28 watersheds (624,000 acres) in the Salmon Fork, Black, Little Black, Kandik, and Grayling Fork as riparian conservation areas (Map 11). Altogether, the Proposed RMP (Alternative E) recommends closing 1.8 million acres (77 percent of the subunit) in the ACEC, Black River watershed, and riparian conservation areas to mining claims and mineral leasing.

L.4.22. Economics

Comment Number: EIRMP000000153C-36, EIRMP000000153C-55, EIRMP000000153E-35, EIRMP000000153F-11, EIRMP000000163B-48, and EIRMP000000348-1

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: federal government, environmental organization and individual

Summary

- The social and economic analysis for the Upper Black River assumes there will be no locatable mineral mining or oil and gas leasing, thus no associated economic effects. This conclusion is flawed as the BLM does not know or try to describe the current socio-economic reality in the Upper Black River Subunit.

- The BLM should conduct a more thorough analysis of the socio-economic impacts by applying a broad view of socio-economic facts, both beneficial and harmful, from various alternatives and ensure that the Proposed RMP/Final EIS relies on such an analysis.

- Jobs in the mining industry will not benefit the local residents of the Yukon Flats who prefer to live off the land. Mining would not improve the economy for the people in the Fort Yukon area because they are not going to be hired. There's lots of construction going on right now in that area and the local people are not being hired. There's airport construction, clinic construction… these construction jobs are not being filled by local people, they're not even being filled by Alaskans.

- The BLM did not address the negative economic consequences that could result from degradation of the primitive and semi-primitive recreational experiences that exist today, and that are increasingly sought after by the independent and guided tourists, photographers, and artists.

- The BLM should consider additional analysis of how increased recreation use could add income for the local village through guiding (hunting, wilderness, and eco-tourism).

Response

Chapter 3 of the Draft EIS, Supplemental EIS, and Final EIS characterize existing social conditions and economic facts. Presentations in section 3.5.2 of the Final EIS describe conditions as they exist today to the extent necessary for impact and decision making at the land use plan level. Alternatives A through E are analyzed as four separate geographic subunits to emphasize differences and provide more specificity in Chapter 4. This analysis is adequate for identification of effects and decision making, both where effects have been quantified as well as where effects involve non-market values which cannot be quantified. See sections 4.3.3 for impacts common to all subunits, and sections 4.4.4, 4.5.4, 4.6.4, and 4.7.4 for effects on economics, environmental justice, social conditions, and subsistence.

The BLM recognizes the concerns of local residents who practice a subsistence lifestyle. The Final EIS analyzes the impacts of mining to subsistence resources and water in chapter 4.

Various sources cited in Chapter 4 (McDowell, State of Alaska) show the economic effect of job creation by mining. The BLM RFD shows the number of jobs resulting from new mining activity. These are seasonal, and may therefore foreclose summer subsistence activities and replace them with cash income. There is also significant non-resident participation, up to 29 percent, in the mining industry, reported by McDowell in The Economic Impacts of Alaska's Mining Industry (2012). Therefore, for those willing, a limited number of jobs will become available.

The BLM did not place a value on or weight on the type of recreation use in areas where mining was potentially expanded. The most that can be said is that under each alternative restrictive management preserves semi-primitive use versus less restrictive management favoring more modern use. In these subunits, Alternative B favors semi-primitive use over modern such as OHV use. Alternatives C and E best meet the goal of providing for multiple recreation use, while sustaining the recreation-resource base and other sensitive resource values of the region. Alternative B emphasizes less motorized recreation use in a more primitive setting, while Alternative D offers more motorized recreation use and includes the most acreage for cross-country OHV travel, followed by Alternative A. It is possible only to describe the economic benefit accruing to one form of recreation in terms of its direction. Thus, Alternative B may benefit guides (and economics) providing semi-primitive experiences, but will do so at the expense of other types of recreational experience. The BLM expects that villages or villagers may be able to sell goods as well as services to recreationists and particularly guides if they are willing to do so. However, the effects would be low. This is discussed in section 4.3.3.1.1.

L.4.22.1. Analysis of Economic Impacts

Comment Number: EIRMP000000092-7

Commenter Type: individual

Summary

The Social and Economic discussion for the White Mountains in Alternative D only estimates the direct cost of mining goods and employees and does not consider the indirect costs of the services and related industries that support mining operations that may occur. The statement that the mining operations in the White Mountains NRA would account for about $3 million underestimates the benefits by $2 to $2.5 million when considering the money spent in Fairbanks supporting mining in the White Mountains NRA. The costs for exploration are also underestimated by about 50 percent from actual dollars spent on this activity in 2012 when including the service industry supporting mineral exploration.

Response

The BLM used IMPLAN multipliers for gold and silver mining in the Final EIS. The employment multiplier is 2.10 and the payroll multiplier is 1.93. See McDowell, *The Economic Impact of Alaska's Mining Industry*, January, 2012. These multipliers give the effect of indirect and induced employment. IMPLAN is the most widely accepted regional economic analysis software for predicting economic impacts.

L.4.22.2. Nonmarket Values

Comment Number: EIRMP000000153B-13 and EIRMP000000153C-37

Organization: Alaska Wilderness League and cosigners

Commenter Type: environmental organization

Summary

The BLM has defined "wilderness characteristics" to include naturalness and providing opportunities for solitude or primitive recreation. In making decisions about managing lands with wilderness characteristics the BLM should recognize the wide range of values associated with these lands including economic benefits. The recreation opportunities provided by wilderness quality lands also yield direct economic benefits to local communities. According to the USFWS in 2006 State residents and non-residents spent $3.4 billion on wildlife recreation in Alaska. (USFWS 2011, National Survey of Hunting, Fishing and Wildlife-associated Recreation -http://www.census.gov/prod/2013pubs/fhw11-ak.pdf).

Response

The point is made in this comment that wilderness characteristics have values not described as economic. For example an economic value resulting from outdoor recreation in Alaska (not wilderness.) Studies such as Colt (2001) referenced in the Draft EIS show that ecosystems support jobs, particularly commercial fishing, but also include jobs in tourism, sport fishing and hunting, land and resource management, resident recreation, and subsistence. Colt also calculated a willingness to pay for sport as well as subsistence activities in Alaska's wilderness. The economic benefit of wilderness characteristics has not been quantified where it occurs in the planning area. However, it is well known that certain character of land is deemed valuable by both those using the land as well as others who value the existence of the land or its character.

L.4.23. Planning Process

Comment Number: EIRMP000000038-3

Commenter Type: individual

Summary

The Fortymile Subunit should be removed from consideration in the Eastern Interior RMP and should continue to be managed under the 1980 Framework Management Plan. If the BLM needs to comply with FLPMA, they can do so by modifying the current 1980 plan to reflect changes, not by writing a complete new RMP.

Response

BLM land use plans developed before 1985 are known as management framework plans. Plans developed after 1985 are RMPs and these are defined in the BLM's planning regulations at 43 CFR Part 1600. The Fortymile Management Framework Plan is considered in the No Action Alternative. Retaining the management framework plan does not meet the BLM's purpose and need for the RMP. Replacing the management framework plan with a RMP is consistent with BLM policy and regulation.

L.4.23.1. Public Outreach

Comment Number: EIRMP000000026-3, EIRMP000000139-2, EIRMP000000153B-7, EIRMP000000153B-8, EIRMP000000153B-9, EIRMP000000157-7, EIRMP000000180-1, EIRMP000000320-5, EIRMP000000196-1, EIRMP000000412-2, EIRMP000000412-1, and EIRMP000000139-2

Organization: Northern Environmental Center, Alaska Wilderness League, Eastern Interior Federal Subsistence Regional Advisory Council, Alaska Department of Natural Resources

Commenter Type: individuals, environmental organizations, state government, and advisory committee

Summary

- The BLM should evaluate its public outreach effort and institute measures that will improve communication and resource management planning education for communities, including improving the project website.
- The BLM should provide another public comment period because a new alternative is added in the Proposed RMP/Final EIS. The public has not had a chance to comment on the Proposed RMP/Final EIS.

Response

The BLM appreciates the difficulty in providing effective public outreach and is striving to improve in this area. The BLM appreciates these constructive comments on the website and is working to improve the content.

The Proposed RMP (Alternative E) is a minor variation of the alternatives analyzed in the Draft RMP/EIS and is qualitatively within the spectrum of alternatives analyzed in the Draft. Additional public comment is not required.

L.4.23.2. Size and Complexity of Document

Comment Number: EIRMP000000038-1, EIRMP000000148-1, EIRMP000000149-2, EIRMP000000153B-6, EIRMP000000153E-38, EIRMP000000161-1, EIRMP000000161-2, EIRMP000000161-3, EIRMP000000161-4, EIRMP000000170-2, EIRMP000000196-2, EIRMP000000320-1, and EIRMP000000320-7

Organization: Chalkyitsik Village Council, Council of Athabascan Tribal Governments, Citizen's Advisory Commission on Federal Areas, Alaska Department of Natural Resources, and Alaska Wilderness League

Commenter Type: individuals, environmental organizations, state government, and state advisory committee

Summary

- The four subunits would be better served by each having their own RMP. This format would define alternatives that are sound and informative, allowing local residents to gain a better understanding of this RMP and to provide recommendations. The Upper Black River Subunit should be removed because the BLM does not have enough information to make decisions for this area.
- The plan is too large and complicated. For many members of the public the task of reviewing such a large and complex plan was daunting and even insurmountable.
- The White Mountains NRA plan is in the context of a total of 10 other plans and regulations that will be superseded, amended or may require new regulations across 6.5 million acres (Section 1.7). This is an overwhelming magnitude of management changes from current conditions and complex new policies.
- Including ANILCA designated units such as Birch Creek, Beaver Creek and Fortymile WSRs, the Steese National Conservation Area and the White Mountains NRA in the same RMP with several millions of acres of undesignated BLM lands leads to inadequate recognition of key management provisions applicable to these ANILCA designated areas.

Response

Given the time and expense required to develop and approve a resource management plan, the BLM chose not to do a separate RMP/EIS for each subunit. We attempted to facilitate public comment by summarizing information by subunit. Removing the Upper Black River Subunit would not meet the purpose and need.

The BLM recognizes that the Draft RMP was long and complicated. We attempted to facilitate public comment by providing subunit summaries and posters displaying major management decisions. We also provided an 11 month public comment period.

Changes to travel management will be addressed in step down travel management plans, allowing for more public participation in development of supplemental rules for both motorized and non-motorized activities and trails. Five of the referenced documents in section 1.7 address supplemental rules.

The BLM addressed this issue by breaking the planning area into four subunits. Undesignated lands were minimal in the White Mountains and Steese subunits, allowing analysis and planning to focus on key management provisions of the referenced areas. The Fortymile WSR was considered in conjunction with undesignated BLM lands in the Fortymile Subunit. The management provisions for the Fortymile WSR were a key consideration during the planning process.

L.4.23.3. Purpose and Need

Comment Number: EIRMP000000164-2, EIRMP000000156-2, EIRMP000000153E-8, EIRMP000000153E-36, EIRMP000000153C-8, EIRMP000000058-1, and EIRMP000000141-4

Organization: Alaska Wilderness League and cosigners, U.S. Fish and Wildlife Service, Fairbanks Economic Development Corporation, Alaska Backcountry Hunters and Anglers

Commenter Type: environmental organization, Outdoor Recreation Organization, Business Organization, and federal government

Summary

- The alternatives in the RMP do not adequately address the purpose and need because they fail to resolve conflicts between resources and Alternative C does not implement additional protections for fish and wildlife populations and habitat, in order to comply with international treaties and sustain subsistence resources and subsistence opportunities.
- Section 1.7 Relationships to BLM Policies, Plans, and Programs fails to explain why changes in regulations pertaining to off-road vehicle use in may be required as a result of the RMP.

Response

The BLM believes that range of alternatives meets the purpose and need of creating a plan that allows for multiple use on some lands while protecting natural resources. Alternative C provides additional protections for fish and wildlife populations and their habitat. For example, Alternative C would designate three ACECs for fish and wildlife and implement many new standard operating procedures to reduce impacts to animals and habitat.

If the revised RMP results in changes to current limitations on use off-highway vehicles or other activities the BLM will publish new special rules in the *Federal Register* to implement these changes. Section 1.7 was revised to explain the relationship between the RMP and special rules for off-road vehicle use.

L.4.23.4. Goals and Decisions

Comment Number: EIRMP000000164-3, EIRMP000000164-4, and EIRMP000000164-6

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The action alternatives presented in the Draft RMP/EIS include components within alternatives which are not fully complementary. This restricts the plans ability to meet the goals or desired conditions. For example, desired future conditions for aquatic habitats include" ... stream channels conditions are stable and consistent with the surrounding landform and watershed." This plan has not demonstrated that reclamation practices can achieve this outcome; therefore, opening areas to mining is not complementary to meeting this desired future condition for aquatic habitats.

Response

These are desired future conditions, meaning that the BLM will strive to achieve these conditions. BLM-managed lands are open to multiple use and it is inevitable that some surface disturbing activities will occur on some lands over the life of the plan. Management decisions may prioritize other activities over protection of aquatic habitat based on site specific analysis of proposed projects. This does not mean that we should strive for a lower level of aquatic habitat condition in the RMP objectives.

L.4.23.5. Monitoring Plan

Comment Number: EIRMP000000153B-37 and EIRMP000000164-13

Organization: Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: environmental organization and federal government

Summary

A detailed monitoring approach is required under the BLM's planning regulations (43 CFR 1610.4-9) including establishing intervals and standards, as appropriate, for monitoring and evaluation of the plan.

Response

A monitoring plan will be developed as part of the ROD. The BLM will evaluate the RMP every five years after signature of the ROD to determine if there is sufficient cause to warrant amendment or revision of the plan.

L.4.23.6. Comparison of Impacts

Comment Number: EIRMP000000139-1
Organization: Northern Environmental Center

Commenter Type: environmental organization

Summary

The RMP does not reflect the scale of the changes that will occur. This could be partially fixed by providing map(s) and table(s) with the combined acreage for all non-renewable resource uses e.g., all areas where mineral resource classifications, allocations, etc. exist today and how they would change in each alternative. The impacts are obscured by use of jargon, e.g., leasable minerals, locatable minerals, salable minerals, throughout the RMP.

Response

Summary tables of the alternatives are provided for each subunit in sections 2.7.3, 2.8.3, 2.9.3, and 2.10.3. Additional text was added to these tables and in the minerals sections of chapter 2 to help define the various types of minerals. Terms are defined in the glossary. An additional summary table is provided listing total land allocations for the entire planning area in section 2.2.6.

L.4.23.7. Incomplete and Unavailable Information

Comment Number: EIRMP000000151-2, EIRMP000000153-29, EIRMP000000153B-52, EIRMP000000153B-53, EIRMP000000153B-56, EIRMP000000153C-29, EIRMP000000153C-31, and EIRMP000000153E-23

Organization: Tanana Chiefs Conference and Alaska Wilderness League and cosigners

Commenter Type: tribal organization and environmental organization

Summary

In the Draft EIS/RMP, the BLM acknowledges the lack of information about wildlife, culture, fish, mineral potential, and trail systems and yet conclusions are drawn regarding impacts to these resources. The BLM must determine if the information is "important," "significant," or "essential," for the agency to make a reasoned decision (40 CFR 1502.22). This determination is not in the RMP. In fact, all of this information is essential, important, and significant to determine impacts to resources in the planning area and for the BLM to make a reasoned choice among the alternatives.

The BLM states the drainages in the Upper Black River Subunit do not have high mineral potential but their assessment is due to lack of data (Draft RMP/EIS p. 760). In Alternative C, the BLM recommends locatable entry in the entire area and goes on to state, "…no mining is anticipated during the life of the plan due to the low mineral potential and lack of access." The BLM cannot proceed without necessary missing information without addressing it. The information on mineral potential is necessary to making a reasoned choice among the alternatives, but the BLM has not determined whether it can obtain that information. The information is further necessary because the BLM relies upon the conclusion that no impacts are anticipated due to low mineral potential. The BLM cannot state on the one hand that there will be no impacts and on the other hand say they do not have sufficient information to assess the mineral potential.

Response

Section 4.2.3 of the Proposed RMP/Final EIS addresses incomplete or unavailable information. Although there are data gaps, enough information is available to make a reasoned choice among alternatives. The BLM has deferred some decisions, such as Travel Management planning, to an activity level plan allowing for collection of more data. The BLM routinely collects additional data through monitoring and inventory and will consider new data collected after approval of the RMP during the NEPA analysis and approval process conducted on each request for a permit.

The BLM determined that new mining claims are not reasonably foreseeable in the Upper Black River Subunit based on the Locatable Mineral Potential and Development Report. This report considered ARDF data, known mineral deposits, and mineral terranes, as well as access and infrastructure. There is little evidence that BLM-managed lands in the Upper Black River ever attracted much locatable mineral exploration or development. Pre-withdrawal activity is one of the best indicators of future activity. There is no record of mining claims on BLM-managed lands in the Upper Black River Subunit before the withdrawals were put in place. The next best indication of future locatable mineral activity is the location of mining claims on adjacent state lands. There are neither state mining claims on state lands in the area nor any substantial activity across the Canadian border. This lack of historic activity or activity on open adjacent lands points toward there being limited future activity on BLM-managed lands if the withdrawals were lifted. The statement referenced in this comment (p. 760) was poorly worded in the Draft EIS and was revised in the Final EIS (section 4.6.2.1.4).

Section 4.2.3 of the Final EIS was revised to clarify that the available information is sufficient to make a reasoned choice among alternatives. The BLM has determined that the Mineral Occurrence and Development Potential Reports provide sufficient information to make a reasoned choice among alternatives and additional study is not essential.

L.4.23.8. Objectives

Comment Number: EIRMP000000164-12, EIRMP000000164-8, and EIRMP000000163B-98

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

Section 2.4.1 [Resources] is lacking measurable objectives and time frame in many resource sections. The BLM Land Use Planning Handbook (H-1601-1) states that "land use plans must identify desired outcomes expressed in terms of specific goals and objectives" and "objectives are usually quantifiable and measurable and may have established timeframes." The alternatives should be reviewed and edited to ensure that components within alternatives are complementary and that measurable objectives be formulated for all resources as a means of evaluating progress toward achieving the goals

Response

As stated in the Planning Handbook, objectives are usually quantifiable and measurable, and may have established time frames. The handbook recognizes that it may not always be appropriate to set objectives to this level in a RMP. Given the general nature of planning decisions, the long time frame that the RMP will apply, existing data gaps, and the large planning area is it difficult to create quantifiable and measurable objectives for all resources. During development of the Proposed RMP/Final EIS, the BLM reviewed these sections to determine if more measurable objectives could be developed.

L.4.23.9. New alternatives Recommended by Public

Comment Number: EIRMP000000164-63 and EIRMP000000198-1

Organization: U.S. Fish and Wildlife Service and Alaska Outdoor Council

Commenter Type: federal government and recreation access organization

Summary

- The BLM should consider an alternative that prevents mining in watersheds that flow onto National Wildlife Refuge lands. The Fish and Wildlife Service is very concerned about the potential impacts on water quality from proposed mining activities in the White Mountains, Steese, and Upper Black River subunits and specifically the Beaver Creek, Birch Creek, Preacher Creek and Black River watersheds. We recommend creation of a new alternative that bridges the gap in acres proposed open to locatable mineral entry between Alternatives B and C, and which would provide increased protection of resources in the Black River and Preacher Creek watersheds.
- There is no alternative that addresses increased access. All the action alternatives increase limitations on access. Access is decreasing across the state and many Alaskans actively use the planning area for mining, hunting, and recreating.

Response

The Draft RMP considered an alternative (B) that closed all watersheds in the White Mountains, Upper Black River, and Steese National Conservation Area. The No Action Alternative (A) closes all lands in the planning area to mining. The Proposed RMP (Alternative E) closes the Steese National Conservation Area and many of the watersheds in the Upper Black River Subunit to mining and mineral leasing. The Proposed RMP (Alternative E) falls between Alternative B and C relative to mineral closures.

The Proposed RMP (Alternative E) would set OHV designations as limited, but defer more specific travel management decisions to step down travel management plans in the White Mountains, Steese, and Fortymile subunits. This will allow for additional public participation in the development of specific limitations on motorized vehicles. The commenter is correct in that the action alternatives generally restrict motorized use more than the No Action Alternative. However, since there are currently no OHV designations in the Black River and Fortymile subunits and cross-country motorized travel, subject to weight limits, is allowed in much of the Steese and White Mountains, this is not unreasonable. The alternatives in the White Mountains provide for use of UTVs on some trails. This type of use is currently not allowed. Additionally, the Proposed RMP (Alternative E) removes some existing restrictions on motorboat and snowmachine use.

L.4.23.10. Tribal Consultation

Comment Number: EIRMP000000130-1, EIRMP000000131-1, EIRMP000000131-2, EIRMP000000141-1, EIRMP000000148-2, EIRMP000000148-6, EIRMP000000149-1, EIRMP000000151-5, EIRMP000000153B-40, EIRMP000000165-3, EIRMP000000166-7, EIRMP000000213-4, EIRMP000000293-1, EIRMP000000294-2, EIRMP000000149-7, and EIRMP000000296-10

Organization: Black River Working Group, Chalkyitsik Village Council, Tanana Chiefs Conference, Tribal Government of Fort Yukon, and Council of Athabascan Tribal Governments

Commenter Type: individual, tribe, tribal organization, and concerned citizen's organization

Summary

- Many comments expressed concern that the level of government-to-government consultation on the RMP was not sufficient and did not meet the requirements of 13175, "Consultation and Coordination with Indian Tribal Governments" (July 30, 201 0) and Department of the Interior Order 3317, "Department of the Interior Policy on Consultation with Indian Tribes" (December 1, 2011).
- Some tribal members expressed concern that the BLM tells the tribe what the plan is, rather giving the tribes an opportunity for leadership and joint decision-making.
- Comment expresses concern about pending state legislation that could affect the level of consultation with tribes for activities on State lands. The BLM must include this information in the RMP, citing policy changes within the State of Alaska regarding resource management, within the cumulative impacts section of the RMP to fully understand the scope of cumulative impacts that Yukon Flats residents could be facing.

Response

The BLM invited tribes to consult on the RMP; developed Memorandums of Understanding with the Gwichyaa Zhee Gwich'in tribal government and the Chalkyitsik Village Council; and met multiple times with both these tribal governments. Tribal consultation is a learning process for both the BLM and the tribes, and requires two-way communication.

The BLM is responsible for management of the public lands and as such must be the final decision maker. However, we welcome input from the tribes. There may be options for cooperation in implementation of the RMP.

The BLM has a requirement to consult with the tribes and will do so for activities occurring on federal land. The recommendations in the RMP to open lands to mineral entry apply only to BLM-managed lands. State lands in the Upper Black River Subunit are already open to development as allowed under state laws. The RMP will not change this. Section 4.2.4 outlines the scope and time frame for the cumulative effects analysis and also identifies activities considered in the cumulative analysis. These include past and present land use activities, reasonably foreseeable future land uses, and projected regional changes due to climate change. The analysis includes activities occurring or projected to occur on state lands.

L.4.23.11. Cooperation and Consistency

Comment Number: EIRMP000000153B-39, EIRMP000000153B-41, EIRMP000000154-1, EIRMP000000410-32, EIRMP000000164-15, EIRMP000000163B-61, EIRMP000000163B-63, EIRMP000000164-11, and EIRMP000000164-74

Organization: Alaska Wilderness League, Fairbanks North Star Borough, U.S. Fish and Wildlife Service, and Gwichyaa Zhee Gwich'in tribal government

Commenter Type: environmental organization, Local government, federal government, and tribe

Summary

- The BLM should work in concert with the USFWS to maximize management that takes into account values managed by both agencies, and include this commitment in the RMP in relation to lands with wilderness characteristics, Recreation Management Areas, ACECs, and wildlife corridors.

- An explanation of the relationship between the BLM Draft RMP/EIS and associated State land use plans or proposals would help the reader to understand the connectivity between land management strategies and regional projects of statewide significance such as: Alaska Stand Alone Gas Pipeline, Alaska Gas line Development Corporation-Alaska Pipeline Project, Alaska Interior Energy Plan, Dunbar Siding to Livengood Railroad Extension Route, Alaska Railroad Corporation-Alaska Canada Rail Link Rails to Resources to Ports, and Timber Planning on State Lands.

- It was not clear if the RMP analyzed whether the proposed alternatives would be consistent with the management purposes on adjacent refuge lands (43 CFR 1610.3-1 and 1610.3-2).

- Expansion of the Salmon Fork ACEC to include the entire area nominated by Chalkyitsik Village would ensure consistency with management of surrounding lands including: Yukon Charley Rivers National Preserve in the U.S. and, the Ni'iinlii Njik Habitat Protection Area, the Ni'iinlii Njik Ecological Reserve, and the Ni'iinlii Njik Wilderness Preserve in Yukon

Territory. The entire watershed of the Salmon Fork of the Black River on the Canadian side is designated a Chinook Salmon Conservation Unit, CK-77, established to delineate units of salmon diversity that are important to people, provide the basis of current and future salmon production, and protect stocks that have unique adaptations that are genetically encoded and are geographically isolated.

- Preacher Creek and Rock Creek in the Steese National Conservation Area represent boundaries between Yukon Flats NWR and BLM management units and are under shared ownership. Opening these rivers to mining will result in incompatible land management policies within a single reach of river. Therefore, Rock Creek should remain closed to locatable and leasable minerals because mineral extraction is incompatible with the Refuge purposes and mandates.

- Because there are possible inconsistencies between the proposed alternatives in the Draft RMP/EIS and Service land use plans and policy, the Service recommends that the BLM provide discussion in the environmental consequences section of the " ... possible conflicts between the proposed action and the objectives of federal land use plans ... and policies ... for the area concerned" as required by 40 CFR 1502.16 (CEQ). Examples where there is a lack of consistency in proposed management and unresolved resource conflicts include continuing downward trend in fisheries, loss of migratory bird habitat on 1,600- 8,300 stream miles proposed open to mining, continued water quality degradation stemming from non-point erosion related to 1,600 to 8,300 miles of streams proposed open to mining; adverse impacts to subsistence resources (e.g., Salmon Fork and Beaver Creek - salmon), continuing downward trend of riparian resources which relates to migratory bird and wildlife habitat, fish, water quality, and subsistence); and adverse impacts to critical caribou and Dall sheep habitat - all of which are trust resources for the Yukon Flats NWR.

Response

Section 1.9 of the Proposed RMP (Alternative E) discusses the relationship between the RMP and plans formulated by federal, state, local, and tribal governments. Proposals for activities that are reasonably foreseeable on state and private lands were also considered in the cumulative impact analysis. These activities are listed in section 4.2.4.

Land use plans must be consistent with state and local plans to the maximum extent consistent with federal law. Where there are competing resource uses and values in the same area, Section 103(c) of FLPMA (43 U.S.C. 1702(c)) requires that the BLM manage the public lands and their various resource values so that they are utilized in the combination that will best meet multiple use and sustained yield mandates. Consistency means that the proposed plan does not conflict with officially approved plans, programs, and policies of tribes, other federal agencies, and state and local governments (to the extent practical with federal law, regulation, and policy).

The designation of the watershed of the Salmon Fork of the Black River on the U.S. side as the Salmon Fork ACEC as proposed in the RMP, is consistent with land management of the remainder of the watershed in Canada as a Chinook Salmon Conservation Unit.

The Proposed RMP (Alternative E) retains congressional closures of the Steese National Conservation Area (including Preacher Creek and Rock Creek) to new mineral entry and mineral leasing.

The USFWS concerns were considered during development of the Proposed RMP/Final EIS and proposed management decisions were adjusted. It should be noted that riparian and aquatic habitats would not be "lost" on every acre recommended open to mining as only a small segment of these areas would actually have active mines. Mining is heavily dependent upon the price of commodities, the location of economically minable deposits, and access. Section 4.2.1.3 discusses what is reasonably foreseeable. Additionally there is a large body of federal regulations requiring restoration and reclamation of mined areas. Most state lands and Native corporation lands adjacent and upstream of the refuges are open to mining.

L.4.23.12. Cumulative Effects

Comment Number: EIRMP000000220-3, EIRMP000000220-4, EIRMP000000153E-14, EIRMP000000163-53, EIRMP000000163-54, EIRMP000000163-57, EIRMP000000163-73, EIRMP000000163B-112, EIRMP000000163B-116, EIRMP000000163B-115, and EIRMP000000166-8

Organization: Alaska Wilderness League, U.S. Fish and Wildlife Service, Gwichyaa Zhee Gwich'in tribal Government

Commenter Type: environmental organization, individuals, federal government, tribe

Summary

Several comments expressed concern about the adequacy of the analysis of cumulative effects:

- Cumulative effects of shifts in ecological patterns that are documented through climate change in the region.
- Cumulative effects of past, present, and future mining across the Eastern Interior, and an evaluation of BLM's ongoing management practices and effectiveness of mitigation measures and permit conditions to maintain water quality in Birch Creek and Fortymile WSR where mining takes place today. This is essential in order to evaluate the cumulative effects of the Alternative D's proposed mineral leasing program in the White Mountains NRA.
- Cumulative effects to fish and aquatic resources, including the effects of invasive species on fish and effects of mining.
- Cumulative effects on wildlife, including quantification of impacts to caribou and other wildlife.
- Cumulative effects to resources in the Upper Black River Subunit from fracking on the Eagle Plains within the Canadian Porcupine drainage.

Response

The RMP addresses cumulative effects for all alternatives and resources in Chapter 4 in both the Draft and Final EIS. Section 4.3.1.1.2 specifically addresses climate change. Additional baseline information on climate was added to section 3.2.1 Air and Atmospheric values.

The Proposed RMP (Alternative E) would not allow mining in the White Mountains NRA. Section 3.2.10 Water Quality outlines current water quality conditions in Birch Creek and the Fortymile WSR.

Cumulative effects of mining on fish and aquatic species is discussed in section 4.3.1.4.2. Since Alaska has relatively few non-native invasive species compared to other states; the BLM reviewed the best available science to determine the range of effects to aquatic and fisheries resources (see Section 4.3.1.4).

Cumulative effects on wildlife are discussed in sections 4.3.1.12.7, 4.4.1.7.6, 4.5.1.7.6, 4.6.1.7.7, and 4.17.1.7.7. The BLM looked at ways to improve quantification of cumulative impacts in the Final EIS, however cumulative impacts are difficult to quantify due to lack of information on future development, lack of ability to predict impacts due this and due to climate change. Suggested metrics for quantifying impacts to caribou are not possible to calculate with available information. In the Proposed RMP (Alternative E), considerably less area is open to locatable and leasable minerals than in Alternative C, reducing potential for direct, indirect, and cumulative impacts to caribou.

Analysis of cumulative impacts considers the impacts of the proposed action when combined with past, present, or reasonably foreseeable future action (40 CFR 1508.7). In that context, reasonably foreseeable future actions are those for which there is an existing decision, a formal proposal or application or highly probable, based on a known opportunity. The reasonably foreseeable future action meeting those criteria is also within the geographic scope and time frame of the analysis. Eagle Plains is located approximately 117 miles southwest of Old Crow and 195 miles east of Chalkyitsik and considered outside the geographic scope of the RMP planning area. Northern Cross (Yukon) Limited is conducting exploration for oil and gas potential on Eagle Plains in Yukon, Canada. The next phase of exploration work is currently being reviewed by the Yukon government. Oil and gas development in Eagle Plains is not reasonably foreseeable because at this stage development is speculative and no formal proposal or application to develop oil and gas has been submitted to the Yukon government.

L.4.23.13. Range of Alternatives

Comment Number: EIRMP000000040-5, EIRMP000000040-6, EIRMP000000141-17, EIRMP000000141-3, EIRMP000000153-1, EIRMP000000153-3, EIRMP000000153-5, EIRMP000000153B-1, EIRMP000000153B-2, EIRMP000000040-2, EIRMP000000040-7, EIRMP000000153-4, EIRMP000000153B-3, EIRMP000000154-3, and EIRMP000000400-1

Organization: Alaska Wilderness League and cosigners, Black River Working Group, and Fairbanks North Star Borough

Commenter Type: individuals, environmental organization, concerned citizen organization, and local government

Summary

- The range of alternatives is not sufficiently broad and does not include a conservation alternative that improves existing management to enhance and more effectively protect the qualities of the four subunits.

- The range of alternatives in the Upper Black River Subunit is narrow in scope and skewed toward a pro-development scenario. Alternative C does not provide a “moderate level of protection, use, and enhancement of resources and services" as described in Chapter 2.

- This plan covers four units of the BLM’s National Conservation Lands (also known as National Landscape Conservation System or NLCS) and a National Recreation Area established by ANILCA. The plan presents an unbalanced management approach favoring resource development that affords inadequate protection for these treasured lands.

- The BLM must ensure that those areas designated for specific uses, such as the White Mountains NRA; Beaver Creek, Birch Creek, and Fortymile WSR; and Steese National Conservation Area, are protected from uses that would conflict with the purposes for which they were designated, particularly mineral development. The alternatives do not reflect this.
- The range of alternatives in the Fortymile Subunit is too narrow, opening 70 percent of the subunit to new leasing and mining claims in Alternative C. Opening up significant areas in the Fortymile subunit does not represent responsible multiple use.

Response

The range of alternatives considered is sufficiently broad, going from zero to 100 percent for many land uses. In general Alternative B is more conservation oriented than the No Action Alternative in many areas. For example, establishing areas of critical environmental concern, standard operating procedures, and off-highway vehicle designations in areas where they currently do not exist.

The availability of lands for mineral entry in the Upper Black River Subunit ranges from 0 to 100 percent, which represents the fullest possible range. The Proposed RMP (Alternative E) falls between Alternative B and C relative to mineral entry. Given that mineral potential in the Upper Black River Subunit is low, access is non-existent, and Alternative C closed the Salmon Fork ACEC to mineral leasing (which has higher potential than locatable minerals) and identified more riparian conservation areas, it is reasonable to assume that Alternative C would provide a moderate level of protection.

The Proposed RMP/Final EIS ensures that the Steese National Conservation Area, White Mountains NRA, and the three wild and scenic rivers are managed in a manner that does not conflict with the purposes for which they were designated. The alternatives reflect this in many ways such as development of standard operating procedures, protective management for caribou and Dall sheep habitats, and limitations on motorized use. The referenced areas would be closed to mineral leasing in the Proposed RMP (Alternative E). The BLM has closely scrutinized the potential opening of the White Mountains NRA through a supplement to the Draft RMP/EIS (Appendix M). Based on this analysis, the Proposed RMP (Alternative E) would keep the NRA closed to both mining and mineral leasing.

Alternatives in the Fortymile Subunit relative to lands open to mineral leasing and mining claims ranges from 0 percent in the No Action Alternative to 91 percent in Alternative D. This represents a reasonable range. Multiple use includes mining and mineral leasing. These uses are heavily regulated and monitored to ensure responsible use.

L.4.23.14. Alternatives and Planning Requirements

Comment Number: EIRMP000000094-8, EIRMP000000094-2, EIRMP000000094-8, EIRMP000000094-9, EIRMP000000153C-31, EIRMP000000136-1, EIRMP000000163B-65, and EIRMP000000163B-66

Organization: Alaska Miners Association, Borell Consulting Services LLC , and U.S. Fish and Wildlife Service

Commenter Type: individuals, industry, federal government, and mining organization

Summary

- The Draft EIS does not review the full range of alternatives required by NEPA because it does not include an alternative that would open all currently closed lands to mineral entry (or leasing where required by statute). Even closing 26 percent of the planning area to prospecting, mineral exploration, claim location, and mine development is too restrictive for lands that have high mineral potential and are not withdrawn from multiple use by statute. Additionally, opening 0 to 54 percent of the Steese National Conservation Area as proposed in the Draft RMP is too narrow of an alternative for this highly mineralized area.

- The RMP does not include a full range of alternatives. No alternative is presented that would 1) remove all stale/obsolete mineral closures, 2) open all lands to mineral entry (or leasing where required by law), 3) provide access to all lands, and 4) reject any added special use or restricted-use designations. To not include such an alternative violates the NEPA process and does not follow the BLM's multiple use mandate under FLPMA.

- It is not clear that the BLM has actually resolved planning issues. The BLM should reevaluate each of the action alternatives and rewrite them so the conflicts between resources are resolved.

- The BLM fails to provide a mix of resource protection, use and development in each alternative because it did not consider the use of stream buffers in areas proposed to be open to mining in any alternative.

Response

NEPA requires the consideration of a range of reasonable alternatives. The Final EIS meets this requirement. Opening 100 percent of the planning area to mineral entry and leasing is not possible, given that approximately 2.3 million acres are withdrawn from location and closed to leasing by ANILCA. Special values for the Steese National Conservation Area include caribou range and Birch Creek. Alternative D would protect the most sensitive caribou habitats and Birch Creek while allowing multiple use to occur on 54 percent of the area. Alternative D proposes opening 100 percent of the Upper Black River subunit and all of the Fortymile Subunit outside of the wild segments of the Fortymile Wild and Scenic River which are withdrawn by statute.

The RMP includes a range of reasonable alternatives as required by NEPA. 1) Alternative D recommends revocation of all 17(d)(1) withdrawals while maintaining most of the ANILCA withdrawals. New withdrawals would be proposed in a few small areas; 2) Congress closed the White Mountains NRA and lands along wild and scenic rivers to mining and the BLM has no discretion to remove these withdrawals. There are no lands where the BLM is required by law to allow mineral leasing. Mineral leasing is discretionary; 3) all alternatives allow for access to public lands through rights-of-way, easements, 2920 permit, or other type of permit such as a mining plan of operations. Casual users can access public lands consistent with reasonable restrictions such as season of use or weight limits; 4) the BLM is required to consider ACECs and to evaluate rivers for eligibility and suitability for addition to the Wild and Scenic Rivers system during the planning process. To not do so would constitute a failure to consider a range of reasonable alternatives.

It is not possible to totally resolve all issues given BLM's multiple use and sustained yield mandate and the vast array of federal laws and policies that apply to public land. The alternatives in the Draft EIS were reviewed during development of Proposed RMP/Final EIS. The Proposed RMP (Alternative E) represents the mix and variety of actions that the BLM believes best resolves issues and management concerns in consideration of all values, programs, laws, and policies.

The alternatives in the Proposed RMP/Final EIS provide a mix of resource protection, use, and development. See Chapter 2. The use of stream buffers is not a required element of a RMP.

L.4.24. Standard Operating Procedures

Comment Number: EIRMP000000133-4, EIRMP000000153B-43, EIRMP000000153B-44, EIRMP000000153B-48, EIRMP000000153C-16, EIRMP000000163-76, EIRMP000000163B-111, EIRMP000000163B-83, EIRMP000000163B-96, EIRMP000000164-64, EIRMP000000163-21, and EIRMP000000164-72

Organization: Alaska Mining Association, Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: mining organization, environmental organization, and federal government

Summary

The BLM has developed Standard Operating Procedures (SOPs) and Fluid Mineral Leasing Stipulations to reduce impacts resources. Commenters had several concerns with proposed SOPs including:

- Level of discretion in the SOPs and the ability of the Authorized Officer to make modifications or exceptions on a project specific basis.
- Possible under estimation impacts because of the discretion allowed in the SOPs.
- Lack of stated criteria whereby a SOP or leasing stipulation could be modified, waived, or excepted.
- Too many SOPs. This is a large burden for an independent Alaskan Mining Corporation or out of State junior mining corporations.
- Redundant language.
- Lacking a list of regulations and/or laws that are more stringent than SOPs.

Response

The purpose of the SOPs is to reduce impacts and enhance reclamation, not to prohibit all activities on BLM-managed lands. By their nature, some authorized activities will cause permanent damage to resources. If potential negative impacts can be mitigated, then there is no rationale for denying the activity.

These SOPs will apply over a six million acre area and be applied for more than 20 years. Every possible circumstance cannot be foreseen. Flexibility in the SOPs allows the agency to adapt to changing environmental conditions over the life of the plan and to allow the use of improved technologies. If an SOP is not adequate to reduce impacts and there is an alternative method that is more protective, the Authorized Officer has flexibility allow the alternative method. The applicant may also propose some other method of achieving the same result as the SOP.

The assumption for analysis of impacts in section 4.2.1.1 was that the SOPs or equivalent alternative will be implemented.

As stated in section A.1.2, SOPs may be modified through site specific analysis of subsequent authorizations, but must still meet the goals and objectives of the RMP. Modifications to SOPs may be appropriate if other measures are taken to protect resources that would result in the same or reduced impact. Criteria for granting exceptions, modifications, or waivers for leasing stipulations is in regulation at 43 CFR 3101.1-4 as discussed in section A.1.3 of the RMP. Project specific monitoring will be used to measure success of the SOPs. Specific metrics are more appropriately developed at the site specific level when project location and design are known.

The BLM has reviewed all the SOPs and consolidated them where possible.

It would be too lengthy to list all the regulations and laws that are more stringent than the SOPs.

L.4.24.1. Bonding

Comment Number: EIRMP000000092-8

Commenter Type: individual

Summary

Appendix A, Standard Operating Procedures has no mention required bonding. By regulation there is a $1,000 bond required for prospecting permits. Hardrock leases require a $5,000 bond as a minimum. These bonds do not include the bonding for reclamation of any and all disturbances caused by on the ground activities.

Response

The commenter is correct, but the effect of these bonds on the decision to apply for an exploration permit or hardrock lease would be minimal. As stated in section A.1 the SOPs generally do not restate requirements that already exist in regulation. Since bonding procedures are outlined in regulation, they are not restated in the SOPs. Additionally it is a moot point since hardrock leasing in the White Mountains was not included in the Proposed RMP (Alternative E).

L.4.24.2. Suction Dredging

Comment Number: EIRMP000000153B-45, EIRMP000000163-38, EIRMP000000163B-132, and EIRMP000000163B-138

Organization: Alaska Wilderness League and U.S. Fish and Wildlife Service

Commenter Type: environmental organization and federal government

Summary

Regarding Hardrock Mineral Leasing in the White Mountains, time periods for in water work should be stated, water quality standards should be met during such work, and these requirements should be added as a SOP. Reviewers recommend creating SOPs for suction dredging and related activities (e.g., use of motorized equipment to remove instream obstacle hazards).

Response

No additional SOPs are necessary for the White Mountains. The Proposed RMP (Alternative E) does not open the White Mountains NRA to mineral leasing. Additionally the NRA is closed to staking of new mining claims by ANILCA and there are no existing mining claims. State and federal water quality standards apply to all BLM-authorized activities.

L.4.24.3. Wetlands and Riparian Habitat

Comment Number: EIRMP000000163B-117 and EIRMP000000163B-144

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

Commenters recommend the BLM formulate a SOP that specifically addresses restoration of floodplain function and beneficial values including connectivity and roughness values (vegetation and substrate). Roughness plays a distinct role in dissipation of water velocity and stream energy, which prevents erosion and settles out sediment.

In areas open to mining or other non-discretionary land uses, the BLM should develop a SOP that specifically addresses how the BLM will restore wetland function and natural beneficial values of wetlands per Departmental Manual 520 and the U.S. Water Resources Council guidelines for Floodplain Management.

Response

SOPs for floodplains, wetlands and riparian habitat have been updated in the Proposed RMP (Alternative E), section A.4.

Procedures for implementing Executive Order 11988, Floodplain Management are set forth as an 8-step decision-making process outlined in Part II of the 1978 Water Resources Council Guidelines. When an action is proposed in a floodplain, the 8-step procedural process will be addressed and integrated in developing land use authorizations.

Procedures for implementing Executive Order 11990, Protection of Wetlands, are outlined in the Proposed RMP/Final EIS section 2.6.2.10.

Standards for reclamation of stream channel and wetland/floodplain areas are included in the 3809 regulations.

L.4.24.4. Mining Claims

Comment Number: EIRMP000000163-59

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

There should be an SOP requiring use of solid markers on all mining claims to prevent death to birds and other wildlife that may become trapped in hollow markers

Response

The BLM is notifying all claimants of dangers to wildlife of open pipe claim markers. An SOP Wild-11 was added to the Proposed RMP (Alternative E): To prevent the entrapment of small animals, particularly birds, all hollow pipes or tubes that are 2-10" in diameter will be filled or capped prior to installation (unless fixed horizontally).

L.4.24.5. Fish Passage

Comment Number: EIRMP000000163-69

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

There should be a SOP for maintaining fish passage in all fish bearing streams.

Response

Standard operating procedures Water-5 and SOP FA-2 address fish passage. See section A.4.

L.4.24.6. Bay RMP

Comment Number: EIRMP0000163B-143, EIRMP000000164-24, and EIRMP000000164-73

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The BLM should consider adopting the Required Operating Procedures found in the Approved Bay RMP and ROD to better protect water, riparian, floodplains, wildlife, fish and aquatic and subsistence resources.

Response

SOPs for floodplains, wetlands and riparian habitat have been reviewed and updated in the Proposed RMP (Alternative E), section A.4.

L.4.24.7. Stream Channel Design

Comment Number: EIRMP000000164-69

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The following mitigation measures should be included in the SOPs for fish and aquatic species: 1) reclamation actions should include an engineered channel design (using certified engineer) and streambank erosion measures, 2) use site specific information to inform stream channel design.

Response

Current requirements within the Proposed RMP/Final EIS for rehabilitation of fish habitat include three objectives which address the concerns in the comment. These objectives include requirements for stream channel design, streambank stability, and instream habitat complexity. See section 2.6.2.3. Assumptions for analysis in section 4.2.1.2 include the following: "Reconstructed stream channels will be designed by an individual(s) trained and qualified for the task and the channel will be built as designed."

L.4.24.8. Sediment Transport

Comment Number: EIRMP000000164-51

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

In addition to the collection and application of flow data into the channel design, sediment supply and sediment transport competence and capacity must be considered in the design. At minimum SOPs addressing stream reclamation should require that the operator conduct sediment transport capacity and competency analyses and provide the methods and basis for the analyses.

Response

While additional data on sediment supply and sediment transport competency is often needed for natural channel design it is not always required. In cases where a stream reach has a moderate to high sediment supply from the upper watershed, this information may be needed. The 43 CFR 3809.401 regulations allow for the BLM to request additional baseline information if it is necessary to ensure prevention of unnecessary or undue degradation.

L.4.24.9. Revegetation Standards

Comment Number: EIRMP000000163B-142, EIRMP000000164-30, EIRMP000000164-31, and EIRMP000000164-54

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

SOPs which address revegetation are inadequate to prevent downward trend in riparian habitat and water quality. The Draft RMP appears to rely on natural revegetation, which is inadequate. Comments suggest incorporating required operating procedure Veg-1c from the Approved Bay RMP.

Response

The BLM modified decisions in section 2.6.2.8 Vegetative Communities to reflect that natural revegetation will be relied upon (vs. active revegetation) only where it will be effective: "Utilize and encourage natural revegetation of disturbed sites as the generally preferred method of revegetation (in situations where this is adequate to prevent erosion and will result in rapid establishment of plant cover). In some circumstances, however some combination of seeding, planting, and transplanting of adult plants or vegetation mats, or fertilizing may be necessary." We reviewed all SOPs and incorporated some elements of required operating procedure Veg-1 from the Bay RMP into the SOPs.

L.4.24.10. Wildlife

Comment Number: EIDRMP_PM_000000001-1, EIRMP000000153C-26, EIRMP000000163-14, EIRMP000000163-40, EIRMP000000163B-119, EIRMP000000163B-99, EIRMP000000164-56, EIRMP000000164-7, EIRMP000000170B-17, and EIRMP000000170B-18

Organization: U.S. Fish and Wildlife Service, Alaska Department of Natural Resources, Alaska Wilderness League

Commenter Type: individuals, federal government, state government, and environmental organization

Summary

Commenters recommend various modifications to wildlife SOPs including:

- SOP Wild-6: Modify the SOP to prohibit domestic sheep, goats and camelids in Dall sheep habitat including casual use; define Dall sheep habitat where this restriction would apply; follow guidelines developed by Alaska Chapter of The Wildlife Society.
- SOP Wild-2: Modify to include BLM wildlife corridor guidance.
- SOP Wild-3: Clarify that compliance with Migratory Bird Treaty Act is also BLM's responsibility; revise vegetation clearing window to match USFWS advisory; describe provisions of MOU with USFWS; strengthen SOPs addressing the protection of migratory birds to be more effective.
- SOP Wild-7: Modify to apply to both mineral exploration and production activities to reduce impacts caribou and sheep.
- SOP Wild-8: Clarify that this SOP applies only to BLM-managed lands and specify which lands it applies to.
- SOP Wild-1: Modify to allow roads next to pipelines to improve inspection and reduce risk of spills.

Response

SOP Wild-6 was removed and replaced with a decision in section 2.6.2.13 prohibiting domestic sheep, goats and camelids in or near Dall sheep habitat. Habitats/areas closed will be identified in during development of supplemental rules. This decision is consistent with the guidelines of the Alaska Chapter of The Wildlife Society.

SOP Wild-2: Wildlife corridor guidance, is not specifically referred to in most wildlife decisions, but will be addressed, where applicable, in implementing wildlife decisions.

SOP Wild-3: The BLM has an MOU with USFWS for conservation of migratory birds (BLM MOU WO-230-2010-04) which includes three pertinent BLM action items. 1) the BLM will "Address the conservation of migratory bird habitat and populations when developing, amending, or revising management plans for BLM lands... [consulting] the current USFWS Species of Concern lists...", 2) consider special designations such as Important Bird Areas, and 3) "At the project level, evaluate the effects of the BLM's actions on migratory birds during the NEPA process. . .and identify where take reasonably attributable to agency actions may have a measurable negative effect on migratory bird populations, focusing first on species of concern, priority habitats, and key risk factors... [and] implement approaches lessening such take." In this RMP, a list of Bird Species of Conservation Concern is compiled (Table 3.17), and decisions and SOPs specify protection measures. SOP Wild-3 specifically addresses vegetation clearing and evaluation of effects at the project level.

SOP Wild-7 was designed to apply to exploration. It would not apply to production because it would not be feasible.

None of the SOPs apply to non-BLM lands.

Roads near pipelines could be allowed under SOP Wild-1, if justified.

L.4.24.11. Fish

Comment Number: EIRMP000000163-22, EIRMP000000163-23, EIRMP000000163-24, EIRMP000000163-25, EIRMP000000163-33, EIRMP000000163-34, EIRMP000000163-35, EIRMP000000163-36, EIRMP000000163-37, EIRMP000000163-64, EIRMP000000163-65, EIRMP000000163-66, EIRMP000000163B-6, EIRMP000000164-49, EIRMP000000164-50, EIRMP000000164-66, EIRMP000000164-70, and EIRMP000000164-71

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The Fish SOPs need to be better defined and revised to better protect fish and aquatic habitats. For example, SOP FA-1, SOP FA-5, SOP FA-6, and SOP FA-7.

Response

The BLM has reviewed and revised the Fish and Aquatic SOPs based on public comments. See Appendix A.4 Standard Operating Procedures Considered in the Proposed RMP.

L.4.24.12. Water Resources

Comment Number: EIRMP000000163-70, EIRMP000000163B-118, EIRMP000000163B-139, EIRMP000000163B-140, and EIRMP000000163B-141

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

The Water SOPs need to be better defined and revised. For example:

- SOP Water-4: The BLM is proposing reconstructing a stream to its pre-disturbance condition be the reclamation standard for mining operations (section 2.4.1.3 Draft RMP). Although a high standard of reclamation is desirable, the environmental effects analysis should reflect realistically achievable reclamation outcomes, clearly address the potential negative impacts to aquatic resources, and provide a timeframe for restoring streams to proper riparian function. Best management practices (BMPs) identified in the ADF&G technical report (Mclean 1997) are useful recommendations.
- SOP Water-1: Define the dimensions of an appropriately sized bypass channel.
- SOP Water-6: Provide time frame for restoring proper functioning hydrologic regime.
- SOPs Water-9 and 10: Revise to prohibit crossings in salmon spawning areas.

Response

SOP Water-4 was dropped because this objective is achieved through SOP FA-6. The BLM considers rehabilitation of fisheries habitat to pre-disturbance condition as a realistically achievable reclamation outcome where careful planning and detailed design of placer mine reclamation are completed prior to and after stream disturbance. The BLM Alaska recently issued Information Memorandum AK-2015-004 which outlines measurable Performable Standards for determining when reclamation on post-mined streams and the rehabilitation of fish habitat will be approved as well as outlining the types of detailed hydraulic and channel information now required for mine plans to be considered complete. For operations that adhere to the new policies and guidance in AK-2015-004, the BLM believes reconstructing a stream to its pre-disturbance condition is a reasonable reclamation standard for mining operations.

Potential negative impacts to aquatic resources from placer mine activities are now clearly addressed in section 4.3.1.4. Fish and Aquatic Species Summary of Effects.

The BLM agrees that BMPs for reclamation of temporary stream diversions offered in Mclean 1997 are useful recommendations. As an example, we would generally include in an approved mining plan a requirement for reclamation of stream diversions similar to the BMP in Mclean 1997 page 10, first paragraph under subheading Reclamation of Temporary Stream Diversions; *Final reclamation of temporary stream diversions must conform to the overall final mine site reclamation plan, but should include provisions for backfilling and contouring the diversion channel.*

SOP Water-1: The actual design of a temporary diversion channel involves the interaction of hydrology, hydraulic engineering, and geotechnical engineering. This interaction can be complex, and miners may be well advised to seek engineering assistance (Mclean, 1997). Design discharge for a site specific by-pass channel should be tailored to site conditions and capabilities and can be estimated using a variety of methods including:

- Log Pearson Type II analysis as defined in Water Resources Council Bulletin 17B, 198 1, "Guidelines for Determining Flood Flow Frequencies" can be used for all routine designs where sufficient stream gauging records exist.
- USGS Regional Regression Equations for Alaska.
- U.S. Army Corps of Engineers modelling program HEC-HMS can be calibrated with rainfall and runoff data.

Where significant uncertainties exist, the by-pass channel design should be able to at least accommodate a bankfull flood event. Temporary by-pass channels are generally constructed to protect water quality of the stream and protect aquatic and fishery resources from excess sedimentation associated with active mining operations.

SOP Water-6: Time frames for restoring specific placer-mine sites to proper functioning hydrologic regime and/or proper functioning riparian areas vary considerably depending on a number of factors including but not limited to biotic and abiotic site conditions, watershed and site specific channel geomorphic characteristics, and local use impacts. For context, the time required to re-establish riparian function would generally be expected to extend into decades for areas with severe disturbance of large aerial extent and less than a decade for areas with minimal disturbance to the stream channel and/or riparian areas.

SOPs Water-9 and 10: Stream crossings in salmon habitat are addressed in SOP FA-1.

L.4.24.13. Soil Resources

Comment Number: EIRMP000000163-67

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

SOP Soils-2 requires placing stockpiled soil and overburden to spread over mine tailings. However, there is no discussion about large tailings piles that could be devoid of finer materials needed to support plant growth. There may be a need to mix fines from another source into the spoils before they are placed and grades/contoured and then covered with stockpiled materials. Also, consideration needs to be given to the depth of the final location of the spoils and the ability for vegetation to reach the water table. Piles that are too high for roots to reach water have been a large reason for failure of reclamation sites.

Response

The BLM recognizes historic placer-mine operations often left waste rock, including large tailings piles devoid of organics and fine sediments, in many Interior Alaska drainages. Efforts to reclaim these areas are ongoing through the Abandoned Mine Lands program.

Current placer-mine operations must meet all applicable performance standards of Section 3809.420, including the following reclamation performance standards:

(i) At the earliest feasible time, the operator shall reclaim the area disturbed, except to the extent necessary to preserve evidence of mineralization, by taking reasonable measures to prevent or control on-site and off-site damage of the federal lands.

(ii) Reclamation shall include, but shall not be limited to:
(A) Saving of topsoil for final application after reshaping of disturbed areas have been completed;
(B) Measures to control erosion, landslides, and water runoff;
(C) Measures to isolate, remove, or control toxic materials;
(D) Reshaping the area disturbed, application of the topsoil, and revegetation of disturbed areas, where reasonably practicable; and
(E) Rehabilitation of fisheries and wildlife habitat.

L.4.24.14. Forestry Resources

Comment Number: EIRMP000000163-68

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

SOP Forestry-2: For forestry operations, Dean and Magoun (2000) recommend a minimal buffer of 100-feet along anadromous or high-value resident fish streams and 50-feet along tributaries to anadromous streams.

Response

SOP Forestry-2 requires that a buffer be considered for every permitted action to protect resource values at risk. Buffer width is better determined on a site specific basis.

L.4.24.15. Hazardous Materials

Comment Number: EIRMP000000038-2

Commenter Type: individual

Summary

SOP Hazmat-10 requires preparation of a Spill Prevention, Control, and Countermeasure Plan (SPCC) for all sites which have the potential to store 1,320 gallons or more of POLs. 40 CFR 112 gives the EPA administration over SPCCs. Requiring an SPCC is outside of BLM's authority.

Response

SOP Hazmat 10 has been consolidated into SOP Hazmat 5. In accordance with 43 CFR 3809.401(b)(2)(vi) a Spill Contingency Plan is required as part of a mining plan of operations. In accordance with 43 CFR 3809.420(a)(6) all operations must be conducted in a manner that complies with all pertinent federal and state laws.

L.4.24.16. Effectiveness of Standard Operating Procedures

Comment Number: EIRMP000000164-67

Organization: Alaska Wilderness League and U.S. Fish and Wildlife Service

Commenter Type: environmental organization and federal government

Summary

It is not clear how the BLM has analyzed the effectiveness of current and proposed SOPs in protecting aquatic and fish habitat from the effects of mining.

Response

Analysis assumes full implementation of the SOPs. Individual sections of the analysis discuss specific SOPs. Therefore impacts discussed in Chapter 4 are impacts remaining after implementation of the SOPs and indicate effectiveness of SOPs.

L.4.25. Mitigation

Comment Number: EIRMP000000164-33 and EIRMP000000163B-129

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

In areas with valid existing claims, compensatory mitigation (possibly the restoration of old mining claims) is a viable mechanism for avoiding the continuation of a downward trend in aquatic resource condition and should be considered in the RMP.

Response

As stated in section 2.6.1 of the Proposed RMP/Final EIS, compensatory mitigation may be applied to activities whose impacts the agency cannot adequately avoid, minimize, rectify, reduce, or eliminate. The BLM supports Compensatory Mitigation actions taken to offset unavoidable adverse impacts to wetlands, streams and other aquatic resources authorized by Clean Water Act section 404 permits and other U.S. Army Corps of Engineers (Corps) permits, and is actively pursuing mitigation policies and practices that more effectively avoid, minimize, and compensate for the impact of development on Department-managed lands and resources. See Clement et al., (2014) for additional information.

L.4.26. Supplement to the Draft RMP for White Mountains

The BLM published a Supplement to the Eastern Interior Draft RMP/EIS to consider the impacts of leasing of locatable minerals in the White Mountains under Alternative D of the Draft RMP. The following comments were submitted on the Supplemental EIS.

L.4.26.1. Range of Alternatives

Comment Number: EIRMP000000023-1, EIRMP000000044-1, EIRMP000000044-6, EIRMP000000094-10, EIRMP000000123-1, EIRMP000000133-1, EIRMP000000145-1, EIRMP000000170B-33, EIRMP000000170B-34, EIRMP000000170B-39, EIRMP000000094-3, 170B-33, EIRMP000000094-4, EIRMP000000094-15, and EIRMP000000170B-35

Organization: Alaska Department of Natural Resources, Resource Development Council, and Alaska Miners Association

Commenter Type: individuals, Business Organization, state government, and mining organization

Summary

- The range of alternatives for leasing of hardrock minerals in the White Mountains NRA is too narrow. The Draft RMP/EIS only considered one alternative and that alternative would only open 16 percent of the area. The Proposed RMP should include rationale for significantly reducing the recommended acreage for mineral leasing from the 44 percent recommended in the 1986 RMP to 16 percent. The potential for mining in the larger area, which the U.S. Bureau of Mines mapped as favorable for mineral discoveries, should be considered in the RMP. By limiting the size of the area available for access, mineral exploration and development, the BLM arbitrarily restricts the possibility of discovering an economic REE deposit.
- In the case of rare earth elements, there is no provision in the RMP to develop and mine a deposit. No company would risk their capital on terms like this. The RMP should state that the BLM may issue competitive leases for lode deposits and describe the types of leases applicable to hardrock mining of load deposits.
- It is unlikely that Roy Creek is the only mineral occurrence or prospect in the White Mountains, because Roy Creek lies within a geologic trend that extends from Livengood to Circle Hot Springs. There are likely more REE prospects within this trend; however, by limiting the size of the area available for access, mineral exploration and development, the BLM arbitrarily restricts the possibility of discovering an economic REE deposit.
- The RMP provides no opportunity to prospect for, lease, explore for or develop any minerals other than REE and placer gold, despite the fact that there may be related economic minerals associated with them. Placer gold deposits are often associated with a lode source; likewise REE minerals are often combined with other metals in complex occurrences; however, there is no provision in the Plan for developing that lode source or the other metals in a polymetallic REE deposit. It appears that in the 11,000 acres available for leasing, the only minerals that could be developed are four of the seventeen rare earth elements identified in the supplement.
- Management direction would be improved if the EIS evaluated economic effects of exploration and leasing for potential lode deposits of gold and other minerals.

Response

The BLM reduced the acreage from the 1986 decision to avoid conflicts with other resource decisions in the RMP, including recreation and wildlife management. Through the RMP, the BLM has chosen to emphasize recreation over mineral leasing. ANILCA directs the BLM to manage the White Mountains for public recreation as one of the primary uses. Given the current levels of recreational use and the public cabins and trail system that have been developed since the last RMP was approved, the BLM believes that considering leasing on 16 percent of the NRA is a reasonable alternative. The proposal in Alternative D was limited to Roy Creek to avoid conflicts with other resource decisions in the RMP

If adopted and implemented, Alternative D would open the area for both exploration and leasing as stated in section 2.10.2.3.2.4. Given the high capitalization cost associated with opening a rare earth mine, it is not reasonably foreseeable that development would occur during the life of the RMP. Therefore, the BLM did not analyze impacts associated with lease development in the Supplemental EIS. If the area is opened for leasing and industry requests a lease sale, the BLM would analyze the impacts of leasing and make a decision to allow or not allow a lease sale at that time.

Alternative D of the Proposed RMP/Final EIS would allow for leasing for all locatable minerals in areas opened to leasing, but known potential for these areas are four rare earth minerals and placer gold.

The analysis of economic effects is limited by the proposed action. Since the proposed action did not include lode leasing for gold, the economic effects are not considered.

L.4.26.2. Alternatives Considered but Not Analyzed in Detail

Comment Number: EIRMP000000164-55

Organization: U.S. Fish and Wildlife Service

Commenter Type: federal government

Summary

In its analysis of the proposed hardrock mineral leasing in the White Mountains NRA in the Supplement to the Draft RMP, the BLM has clearly shown that mineral leasing would not be compatible with the purposes for which the NRA was established. Since compatibility between mineral leasing and development and the purposes for which the NRA was established is a requirement that must be met to allow leasing (43 CFR 3585.1), it is unclear why there is no discussion of the alternative of mineral leasing in the White Mountains NRA in section 2.3 "Alternatives Considered but Not Analyzed in Detail."

Response

The BLM determined that a full analysis of the impacts of leasing was appropriate. This is the reason that the Supplement was developed and published for public comment.

L.4.26.3. Incomplete and Unavailable Information

Comment Number: EIRMP000000044-3, EIRMP000000094-11, EIRMP000000094-12, EIRMP000000094-13, EIRMP000000133-2, EIRMP000000133-3, EIRMP000000170B-35, and EIRMP000000170B-38

Organization: Alaska Miners Association, Alaska Department of Natural Resources

Commenter Type: mining organization and state government

Summary

- Alternative D only opens 16 percent of the White Mountains to placer gold and rare earth minerals. This ignores the potential for other types of deposits (tin, lead, zinc, silver, etc.), the fact that placer deposits can occur anywhere, and the rare earth deposit may be part of a belt that stretches far to the west.

- There is a discrepancy between the conclusions and recommendations of the field investigations conducted by the U.S. Bureau of Mines and those of the simple literature review used by the BLM to develop its Mineral Occurrence and Development Potential Report. The mineral resource assessment done by the U.S. Bureau of Mines in 1989 ("OFR 12-89") found approximately 44 percent of the lands in the study area are geologically favorable for non-placer mineral deposits. Nearly the entire area is "Favorable for metallic and related nonmetallic deposits" and at least half of the area is "Highly favorable for metallic and related nonmetallic deposits."
- Several areas contain favorable mineral terranes, but were not assigned any mineral potential in the Draft RMP/EIS. The BLM should not arbitrarily choose which areas are to be open and which are to be closed based on aging and incomplete data.

Response

Areas available to leasing are limited. No significant lode gold deposits were noted in the ARDFs in the White Mountains area. The area of High rare earth element potential follows contacts established by the DGGS and USGS during their geologic investigations.

The information in USBM OFR 12-89 was considered; resource locations in southern White Mountains NRA were included as high mineral development potential and the more remote areas were given a lower potential rating based on their remote locations.

The highest probability of an economic mineral deposit being discovered was in Area 11, which covers the entire subunit. The area of highest potential for placer gold is in the southern area which is designated as having high placer potential. Many of the metals considered in the 1989 study dropped in price and have only recovered to the same or more relative value in recent years. Few metals, with the exception of REEs and gold, have exceeded twice their relative value from 1989. Known REE and placer gold bearing areas were designated as high potential.

L.4.26.4. Impact Analysis

Comment Number: EIDRMP-0-12100-1, EIRMP_supp-0-12050-1, EIRMP_supp-0-12052-9, EIRMP_supp-0-12101-3, EIRMP_supp-0-12101-4, EIRMP_supp-1-20261-2, EIRMP000000092-4, EIRMP000000092-5, EIRMP000000096-11, EIRMP000000153E-12, EIRMP000000153E-15, EIRMP000000153E-17, EIRMP000000153E-18, EIRMP000000153E-19, EIRMP000000153E-27, EIRMP000000153E-28, EIRMP000000153E-29, EIRMP000000153E-32, EIRMP000000277-2, and EIRMP000000338-1

Organization: Alaska Miners Association, Alaska Wilderness League and cosigners, and Northern Alaska Environmental Center

Commenter Type: individuals, mining organization, and environmental organization

Summary

The EIS for the Supplement does not sufficiently address the direct, indirect, and cumulative impacts of a hardrock mineral leasing program in the White Mountains. Although the RMP estimates that 20 miles of new roads could be constructed for placer mining, these are not shown nor are their effects evaluated. There would also be significant impacts on Dall sheep, caribou, moose and their habitats, salmon and aquatic habitat, and recreation use.

Response

Impacts of hardrock mining in the White Mountains are analyzed in the Supplemental EIS, which is included in Appendix M of the Final EIS.

L.4.26.5. Assumptions for Analysis

Comment Number: EIRMP_supp-0-12052-2, EIRMP000000092-1, and EIRMP000000259-1

Commenter Type: individuals

Summary

- It is incorrect to imply that allowing exploration permits for rare earth elements in the White Mountains will have minimal effects on the landscape and environment because substantial developments over the life of the current plan are not anticipated. It still results in a big change in the regulatory and management environment that will exist when it comes time to develop the next 20-year plan. Allowing exploration now can result in huge changes to the landscape and environment down the road.
- It is incorrect to assume that in Alternative A the White Mountains NRA would remain closed to mineral leasing. The existing RMP opened much of the area and regulations for leasing are in place.

Response

Reasonably foreseeable future actions are those for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends. Development of a rare earth mine in the White Mountains is speculative given the high capitalization cost of such a project, the lack of infrastructure, and the limited data available on the quality of the mineral deposit. NEPA does not require the agency to speculate about future actions. An exploration license does not grant the lease holder any preference or any other right to a lease. If the BLM were to consider a lease sale in the future, the impacts of development would be analyzed at that time. The Authorized Officer would make a decision to hold a lease sale or not, based on that future impact analysis.

The existing White Mountains RMP (BLM 1986) recommended opening part of the NRA to mineral leasing. However, public land order 5180 (which closed the area to the mineral leasing laws) was never modified or revoked and an opening order was not issued by the Secretary of the Interior. Therefore, the area remains closed.

L.4.26.6. Reasonable Foreseeable Development

Comment Number: EIRMP_supp-0-12052-7 and EIRMP000000039-4

Commenter Type: individuals

Summary

- The Supplement only considers suction dredge mining and small and large scale mechanized placer operations which only take place along stream beds. Yet the maps show large areas of uplands as open to gold mining and having high to medium potential for gold. Is there a possibility of having a Fort Knox open pit type operation?

- The White Mountains NRA is largely limestone terrain. It has not been identified by mineral resource experts as a potential for new discovery. In addition the need for new rare earth elements or minerals is debatable.

Response

The reasonably Foreseeable Development Scenario as described in section 4.2.1.3.4 found that no open pit mines are anticipated on BLM-managed lands during the life of the RMP. The EIS considers the impacts of two large lode mines on state lands as part of the cumulative impact analysis.

The commenter is correct that the White Mountains are largely a limestone terrain, but there are known mineral occurrences of rare earth minerals and there is elevated mineral industry interest in those commodities based on exploration activity and commodity prices.

L.4.26.7. Effects on Recreation

Comment Number: EIRMP_supp-0-12052-5, EIRMP_supp-0-12101-1, EIRMP_supp-1-20261-1, EIRMP_supp-1-20261-3, EIRMP000000051-1, EIRMP000000052-1, EIRMP000000054-1, EIRMP000000054-3, EIRMP000000055-2, EIRMP000000056-2, EIRMP000000061-1, EIRMP000000153-22, EIRMP000000153-65, EIRMP000000153-66, EIRMP000000153-68, EIRMP000000153E-31, EIRMP000000153E-40, EIRMP000000235-3, EIRMP000000335-1, EIRMP000000347-2, EIRMP000000360-1, EIRMP_supp-0-12053-1, EIRMP000000052-2, EIRMP000000062-1, EIRMP000000153-64, EIRMP000000173-1, EIRMP000000235-1, EIRMP000000235-2, EIRMP000000272-1, EIRMP000000277-3, and EIRMP000000338-2

Northern Alaska Environmental Center, Alaska Wilderness League and cosigners, and U.S. Fish and Wildlife Service

Commenter Type: individuals, environmental organization, and federal government

Summary

Hard rock mineral leasing would have a negative impact on recreation in the White Mountains NRA. These are incompatible uses. Increased noise and traffic from mining operations will degrade the recreation opportunities. The BLM needs to analyze these impacts in the EIS.

Response

The BLM analyzed the direct, indirect and cumulative impacts in the Supplement, Hardrock Mineral Leasing in the White Mountains NRA on pages 35-38 of the Supplemental EIS. This analysis found that short term affects could be mitigated through the SOPS or stipulations associated with a NEPA analysis; however there was a determination of a cumulative adverse effect on the administration of the recreation area. Impacts from noise, traffic and access impacts are addressed on pages 39-41 of the Supplemental EIS (See Appendix M of this document).

L.4.26.8. Effects on Fish

Comment Number: EIRMP_supp-0-12052-4, EIRMP000000059-2, EIRMP000000153E-16, EIRMP000000153E-24, EIRMP000000164-59, EIRMP000000164-60, EIRMP000000281-1, and EIRMP000000347-1

Organization: Alaska Youth for Environmental Action, Alaska Wilderness League, U.S. Fish and Wildlife Service, and Northern Alaska Environmental Center

Commenter Type: individuals, environmental organizations, and federal government

Summary

Opening the Beaver Creek drainage to mineral leasing would adversely impact fisheries in Beaver Creek WSR. More studies are necessary prior to opening up Roy Creek.

Response

The Proposed RMP (Alternative E) keeps the White Mountains NRA closed to mineral leasing and exploration, including Roy Creek. Impacts to fisheries under Alternative D were analyzed in the Supplement, Hardrock Mineral Leasing in the White Mountains National Recreation Area which is included in Appendix M of the Proposed RMP/Final EIS.

L.4.26.9. Effects on Wildlife

Comment Number: EIRMP_supp-0-12052-8, EIRMP000000096-12, EIRMP000000346-1, EIRMP_supp-0-12052-8, EIRMP_supp-0-12101-2, EIRMP000000164-57, EIRMP000000164-58, EIRMP000000258-2, and EIRMP000000346-1

Organization: Alaska Miners Association and U.S. Fish and Wildlife Service

Commenter Type: individuals, federal government, and mining organization

Summary

Several comments stated that mineral leasing in the White Mountains NRA would impact wildlife, especially Dall sheep (displacement from a rutting area and damage to habitat), moose (damage to habitat) and caribou (calving and postcalving habitat). New roads associated with mining would increase pressure on wildlife. Required operating procedures would have little effect during mineral production. Other comments considered impacts from mining in the White Mountains NRA to be overstated because access for mining activities will be tightly regulated.

Response

Mineral leasing would increase access and create surface disturbance from roads, trails, and mine sites in a variety of habitats that are difficult to reclaim to natural conditions. Although these impacts may be mitigated through wildlife harvest management, tight regulation of mining activities, and mitigation measures, there would be unavoidable impacts to wildlife and habitats from mining activity. Impacts under Alternative D were analyzed in the Supplement, Hardrock Mineral Leasing in the White Mountains National Recreation Area which is included in Appendix M of the Proposed RMP/Final EIS. Mineral leasing in the White Mountains NRA is not included in the Proposed RMP (Alternative E).

L.4.26.10. Off-site Effects

Comment Number: EIRMP000000153-13 and EIRMP000000153E-13

Organization: Alaska Wilderness League

Commenter Type: environmental organization

Summary

Mineral operations in the headwaters of Beaver Creek WSR would degrade a broader area because it flows through the Yukon Flats National Wildlife Refuge to the Yukon River and provides clean water that sustains the fish and wildlife habitats, water quality, subsistence resources, and international treaty obligations for migratory birds, salmon, and others.

Response

In the Proposed RMP (Alternative E) no mining would occur on the headwaters of Beaver Creek. Impacts under Alternative D were analyzed in the Supplement, Hardrock Mineral Leasing in the White Mountains National Recreation Area which is included in Appendix M of the Proposed RMP/Final EIS.

L.4.26.11. Effects to Beaver Creek

Comment Number: EIRMP000000153-67, EIRMP000000153E-16, EIRMP000000354-1, EIRMP000000258-2, EIRMP000000153E-41, and EIRMP000000153-14

Organization: Alaska Wilderness League

Commenter Type: individuals and environmental organization

Summary

- The Supplement proposed allowing placer mining in Alternative D. This conflicts with the existing management plan (1986 RMP) which states, “extensive placer mining on Beaver Creek or its principal tributaries would be in conflict with recreational purposes because of degradation to natural and primitive values of the Beaver Creek WSR corridor and damage to Arctic grayling habitat.”
- Mining in the White Mountains would have significant adverse effects on recreation and conservation values including Beaver Creek WSR and its intact watershed where important fisheries habitat is found including Arctic grayling. Grayling are identified as one the values for which Beaver Creek was established as a wild and scenic river.

Response

The Supplement did not propose placer mining in Beaver Creek and many of its principal tributaries, including Victoria, Colorado, Wickersham, and Nome creeks. The reasonably foreseeable development scenario does not forecast "extensive" mining. Conditions have changed since 1986. The mining regulations under 43 CFR 3809 are much more stringent.

Impacts were analyzed in the Supplement, Hardrock Mineral Leasing in the White Mountains National Recreation Area, which is included in Appendix M of the Proposed RMP/Final EIS.

All mining activities on BLM-managed lands would be reviewed following NEPA where changes to the natural or human environment would be analyzed. Any impacts to the free-flow, water quality or outstandingly remarkable values of Beaver Creek WSR would be addressed to protect and/or enhance those values. Activities on non-BLM-managed lands that would impact Beaver Creek WSR values would be addressed under Section 7 of the Wild and Scenic River Act if federal money is used or federal permits are required.

L.4.26.12. Mitigation and Standard Operating Procedures

Comment Number: EIRMP_supp-0-11950-1, EIRMP_supp-0-12050-2, EIRMP_supp-0-12102-1, EIRMP_supp-1-20961-1, EIRMP_supp-1-20961-2, and EIRMP000000108-1

Commenter Type: individuals

Summary

The BLM should establish a policy to minimize degradation of recreation resources before exploration of licenses or leases for hard rock or placer mining are offering the White Mountains NRA. Wherever possible, maintaining a visual screen of forest cover to obscure development from the view of cabins or trails. Maintain an adequate physical buffer of intact vegetation to filter erosion between exploration sites and navigable creeks, streams and rivers.

Response

Buffers are addressed in Section 3.2.9 of the Supplement. Additional buffers are addressed in the Supplement, specifically for Recreation in Section A.2.7 and for Wildlife in Section A.2.14. The Proposed RMP (Alternative E) would keep the White Mountains NRA closed to all forms of mining.

L.4.26.13. Effects to Poker Flats

Comment Number: EIRMP_supp-1-20611-1

Commenter Type: individual

Summary

Allowing leasing of locatable minerals in the White Mountains NRA would adversely affect the University of Alaska's Poker Flats Research Range. Mining activity in the downrange path of research rockets conflicts with NASA safety requirements. Jobs would be lost and the scientific research sent overseas because Poker Flats, the last northern research range in North America, would be forced to close.

Response

If leasing of locatable minerals is allowed in the White Mountain’s, it is anticipated that over the life of the plan, the vast majority of mineral exploration and development activity would take place in the summer. The Final Environmental Impact Statement published for the Poker Flats in 2013 states that historically the majority of launches have occurred during the winter months. For example, over the last 10 years, all launches have taken place between January and April, and that this is likely to continue. As such, mining activity is unlikely to have an adverse effect on the Poker Flats mission or cause a substantive conflict with NASA safety requirements.

Additionally, the Proposed RMP (Alternative E) does not propose allowing leasing in the White Mountains NRA.

L.4.26.14. Authority to Allow Leasing of Locatable Minerals

Comment Number: EIRMP000000051-2, EIRMP000000153-15, EIRMP000000153-22, EIRMP000000153-55, EIRMP000000153E-11, EIRMP000000153E-20, and EIRMP000000153E-21

Organization: Alaska Wilderness League

Commenter Type: individual and environmental organization

Summary

The BLM should reconsider its interpretation of its authority under ANILCA to offer hardrock mineral leases in the White Mountains NRA. The statute grants only limited authority to offer mineral leases in the area in connection with dam or other water projects and does not authorize the broad leasing program Interior proposes in Alternative D. Interior's regulations governing the White Mountains similarly restrict leasing in the area only to that authorized by ANILCA. The BLM lacks authority to offer the broad leasing program contemplated in its Hardrock Minerals Leasing Supplement revised Alternative D.

Response

The BLM interprets Section 1312 of ANILCA as allowing for the disposal of previously locatable minerals (such as gold) within the White Mountains NRA by lease, as described in BLM regulations 43 CFR part 3580, subpart 3585. Pursuant to 43 CFR 3585.1, the BLM can open lands in the NRA to mineral leasing and development under the land use planning process when it determines that "such use and development would be compatible with, or would not significantly impair, public recreation and conservation of the scenic, scientific, historic, fish and wildlife or other values contributing to public enjoyment". This authority is not limited to areas associated with dams or other water projects.

L.4.27. ANILCA Provisions

Comment Number: EIRMP000000170-4

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

It is imperative that all relevant provisions of ANILCA be fully recognized and integrated into the final plan's management framework so that the public and land managers are fully informed of ANILCA's statutory guidance during plan implementation.

Response

The requirements of ANILCA (and other federal laws) have been integrated into the Proposed RMP/Final EIS. Land managers are responsible for being informed of applicable laws and regulations during plan implementation.

L.4.27.1. ANILCA Title 8 Timber

Comment Number: EIRMP000000170-21

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

ANILCA Title VIII allows subsistence use of timber within the WSR corridors. The plan's blanket prohibition without specific justification is inconsistent with ANILCA and unnecessarily restricts subsistence use. The RMP should instead consider a riparian setback for personal use timber cutting without restrictions on access to the river, which provides a natural transportation corridor that facilitates moving cut logs. Blanket prohibitions on cutting timber for personal use within Wild and Scenic River corridors could potentially have greater impact on resources outside the corridors, where such activities would involve repeated trips and the need for trails and brushing for cross-country travel.

Response

Alternative D and the Proposed RMP (Alternative E) allow subsistence use of timber on all lands, including wild and scenic river corridors. Standard operating procedures in Appendix A.4.3 include a stream buffer.

L.4.27.2. ANILCA Section 810

Comment Number: EIRMP000000141-2, EIRMP000000410-10, and EIRMP000000410-12

Organization: Black River Working Group and Gwichyaa Zhee Gwich'in tribal Government

Commenter Type: concerned citizen organization and tribe

Summary

- The BLM did poor job informing members of the community what a section 810 analysis is or that section 810 hearings would be held at public meetings. Residents had no opportunity to prepare for an 810 hearing.
- The BLM failed to make the required determinations under Section 810(a)(3) of ANILCA.

Response

The BLM recognizes that it is difficult to convey complicated information and appreciates constructive criticism on how to improve public outreach. Consistent with policy, the BLM sent a notification letter of the section 810 hearings with copies of the section 810 analysis to the affected tribes, Eastern Interior Regional Advisory Council Members, the Commissioner of the Department of Fish and Game, and chairs of the Fish and Game Advisory Councils. These letters were mailed out well in advance of the meetings. Advertisements for the meetings indicated that they included a section 810 hearing. The BLM staff at the meetings explained the purpose of the hearing. Additionally, the BLM held two hearings in most communities.

The Section 810 analysis in the Draft RMP/EIS was a draft finding for public review. By policy, the BLM makes the section 810(a)(3) determinations in the Proposed RMP/Final EIS. However, section 810(a)(3) findings are only required if there is a finding of significant restriction on subsistence use in the proposed action (or agency preferred alternative in the case of an RMP). Because the BLM found no significant restriction on subsistence use for the Proposed RMP (Alternative E), no findings under section 810(a)(3) are required.

L.4.27.3. ANILCA Section 811

Comment Number: EIRMP000000071-1, EIRMP000000170-10, EIRMP000000170-11, EIRMP000000170-5, EIRMP000000170-50, EIRMP000000170-52, EIRMP000000170-53, EIRMP000000454-4, EIRMP000000412-8, and EIRMP000000412-9

Organization: Alaska Outdoor Council and Alaska Department of Natural Resources

Commenter Type: recreation access organization, state government, and individuals

Summary

- Proposed restrictions on travel include requirements for “free permits” in areas designated as “closed.” These “free permits” are required for both access under ANILCA Section 1110, i.e. “snowmobiles for traditional activities and travel to and from villages and homesites” and subsistence use of “…snowmobiles or other means of surface transportation traditionally employed” under Section 811. Requiring permits for ANILCA-protected access, even if tempered by no monetary cost, still constitutes a restriction on users who currently do not need to obtain a permit. Permit requirements should be considered a last resort but if determined necessary, must be implemented by the appropriate regulatory authority under ANILCA.

- The interim measures for Travel Management include numerous statements that ANILCA protected modes of transportation (i.e. non-motorized, snowmobiles and aircraft) will be “generally” allowed, with some that are additionally subject to reasonable “provisions.” Such statements are inconsistent with ANILCA Sections 1110 and 811, which state specific modes of transportation “shall” be allowed, subject to reasonable regulation. As noted, any restrictions must be implemented in accordance with ANILCA implementing regulations. All references to “generally” allowed and reasonable “provisions” should be removed from the plan and replaced with statements that clarify these uses are allowed pursuant to ANILCA and any subsequent restrictions will be implemented in accordance with the appropriate DOI ANILCA-implementing regulations.

- The Eastern Interior Draft EIS fails to explain why the BLM process for restricting ANILCA-protected access is inconsistent with the process established in National Park Service and USFWS ANILCA-implementing regulations. In the preamble for the Title XI regulations at 43 CFR 36, DOI indicated that while the BLM did not intend to promulgate Title VIII regulations in the near future, internal procedures required satisfying Title VIII requirements (51 FR 31619). Twenty-five years later, the BLM relies on the Section 810 Analysis to satisfy the requirements of Section 811. Using the Section 810 process to implement Section 811 access restrictions is inconsistent with ANILCA and inadequate.

- The BLM is proposing numerous restrictions affecting access and uses protected under ANILCA without site-specific justification. Where justification is provided, the plan relies heavily on general statements, such as “protection of “wild” classification of a WSR”, or “to maintain appropriate recreational setting” as the only rationale. The plan contains no indication of extensive public use, site-specific resource concerns or user conflicts to justify the proposed restrictions.

Response

In the Proposed RMP (Alternative E) there are no areas closed to the use of snowmobiles.

All references to "generally allowed" have been removed. "Provisions" as used in the Draft is synonymous with "reasonably regulation." All reasonable regulations will be instituted using procedures outlined in ANILCA and 43 CFR 36.

While the BLM has not promulgated regulations for implementing ANILCA Section 811, we will follow a procedure similar to the NPS and USFWS, which is similar to that outlined in 43 CFR 36. Decisions in the Final RMP/EIS that affect access and use covered under ANILCA Sections 811 and 1110 will be noted as "proposed". Following the signing of the Records of Decision, the BLM will undertake the process of proposing these restrictions as Supplemental Rules by publishing them in the *Federal Register*, soliciting comments from the public, holding hearings in the affected communities, and responding to comments in the *Federal Register* along with the final rules. See Section 2.5 of the Proposed RMP/Final EIS.

Proposed restrictions to motor boats in wild segments of wild and scenic rivers have been removed from the Proposed RMP (Alternative E).

L.4.27.4. ANILCA Section 1010

Comment Number: EIRMP000000170B-37 and EIRMP000000170B-40

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

The BLM should describe and summarize specific mineral assessments of potential lode mineral deposits conducted within the White Mountains since 1986 and describe how the DOI has met or not met the legal requirements of section 1010 of ANILCA. Until the DOI completes legal obligations to appropriately assess the mineral potential of the White Mountains NRA pursuant to ANILCA, exploration licenses should be made available to applicants to explore all areas that would not significantly impair recreational values or use, to obtain geologic, environmental, and other pertinent data concerning lode deposits.

Response

The BLM has complied with section 1010 of ANILCA. Existing mineral assessments were used in development of the Eastern Interior Locatable Mineral Development and Potential Report and are cited in the report. This report is available on line at: www.blm.gov\ak\eirmp

L.4.27.5. ANILCA Section 1110

Comment Number: EIRMP000000071-1, EIRMP000000412-16, EIRMP000000412-17, and EIRMP000000170-53

Organization: Alaska Department of Natural Resources, ANILCA Program

Commenter Type: state government and individuals

Summary

The RMP restricts use of all-terrain vehicles. Use of all-terrain vehicles is a traditional means of transportation for harvesting food in the planning area. Traditional access is guaranteed by ANILCA.

Response

The BLM has not made a traditional use determination under section 1110 of ANILCA. Under the Proposed RMP (Alternative E) specific travel management decisions, such as seasonal restrictions for the White Mountains, Steese, and Fortymile subunits has been deferred to travel management plans to be completed after approval of the RMP. Additional public input will be sought at this time. During the interim, travel management would be managed as outlined in the Alternative A (No Action). This includes reasonable restrictions on weight and season of use.

L.4.27.6. 43 CFR 36.11h Closure Procedures

Comment Number: EIRMP000000170-54, EIRMP000000170-6, EIRMP000000170-7, EIRMP000000170-8, EIRMP000000412-33, EIRMP000000412-5, EIRMP000000412-6, EIRMP000000412-7, EIRMP000000431-6, and EIRMP000000408-12

Organization: Alaska Department of Natural Resources, ANILCA Program, and Citizen's Advisory Council on Federal Areas

Commenter Type: state government and state advisory committee

Summary

- The RMP should explicitly recognize that the appropriate regulation for implementing all Section 1110(a) access restrictions is 43 CFR 36.11. The Draft EIS proposes restrictions on allowed uses without this required detrimental use finding and instead proposes to restrict use to preserve desired outcomes and subjective experiences. Such restrictions are contrary to the intent in ANILCA, which is to allow access to Alaska's remote areas unless resource values are threatened. The plan references the regulations at 43 CFR 36.11(h) as the process that will be followed to restrict airboats, hovercraft and personal watercraft; however, the plan does not commit to following the closure process for Section 1110(a) restrictions, such as snow machine season, width and weight limits, motorboat horsepower limits, or pack animal and bicycle restrictions. For example, to restrict pack goats in Dall sheep habitat, which is a protected form of non-motorized surface transportation under ANILCA Section 1110(a); 43 CFR 36.11(h) includes requirements for a finding that such use would be detrimental to the resource values of the area, a notice and hearing process, and time limits for temporary restrictions.

- The White Mountains Travel Management Plan in Appendix B does not recognize Section 1110 access, or implementing regulations at 43 CFR 36 that apply to the ANILCA unit.
- The BLM should recognize and commit to follow the criteria and notice requirements in the USFWS and NPS regulations, promulgated in the early 1980s to implement Section 811 of ANILCA (50 CFR 36 and 36 CFR 13, respectively). This process ensures subsistence access is not unnecessarily or arbitrarily restricted and provides local rural residents with adequate notification and public hearings, prior to implementation.

Response

Under the Proposed RMP (Alternative E), no restrictions on motorboats, hovercraft, personal watercraft, or airboats are proposed. Any restrictions to ANILCA section 1110 (a) uses (such as maximum snowmachine weight and width) will follow 43 CFR 36.11(h) procedures.

The draft travel management plan for the White Mountains in Appendix B has been removed from the Proposed RMP/Final EIS. The BLM will prepare a travel management plan for the White Mountains within five years of approval of the record of decision.

The BLM is committed to following the process outlined in section 2.5 of this document for restrictions and closures under Sections 1110 and 811 of ANILCA.

L.4.27.7. ANILCA Section 1312b

Comment Number: EIRMP000000136-4 and EIRMP000000092-3

Commenter Type: individuals

Summary

The RMP fails to meet the requirements of ANILCA Section 1312(b) regarding leasing in the White Mountains. Congress directed the BLM to objectively consider leasing for minerals and the BLM has not done that.

Response

ANILCA section 1312(b) states that the Secretary of the Interior may permit the removal of leasable minerals within in the recreation area if such disposition would not have significant adverse effects on administration of the recreation area. ANILCA does not require the Secretary to allow leasing. The BLM considered a leasing alternative for the White Mountains NRA in the Supplement to the Draft RMP/EIS. This analysis has been incorporated into the Proposed RMP/Final EIS (Appendix M).

L.4.27.8. ANILCA Section 1323b

Comment Number: EIRMP000000152-3 and EIRMP000000453-7

Organization: Doyon, Limited

Commenter Type: Native Corporation

Summary

ANILCA Section 1323(b) requires the BLM to provide adequate access to non-federally owned land surrounded by public lands. The Draft EIS, however, contains no mention of this critically important provision. The Draft EIS simply states that "Rights-of-way authorizations on [non-CSU] BLM-managed lands would be considered, and authorized under Title V of FLPMA in accordance with the regulations found in 43 CFR 2800." In developing the Proposed RMP/Final EIS, the BLM should specifically address the access guaranteed to Doyon and other inholders under Section 1323(b).

Response

The following language was added to section 2.6.3.3 of the Proposed RMP/Final EIS. “Provide access to non-federally owned lands, including ACECs, adequate to secure the owner the reasonable use and enjoyment of such lands as required by section 1323(b) of ANILCA. Access across ACEC lands is not precluded by ACEC designation. Proposals for access across ACEC lands to private lands would be considered and evaluated on the basis of environmental impacts.”

L.4.27.9. ANILCA Sections 1326 and 101(d)

Comment Number: EIRMP000000457-3, EIRMP000000077-2, EIRMP000000094-19, EIRMP000000132-2, EIRMP000000144-3, EIRMP000000170-14, EIRMP000000161-12, EIRMP000000412-21, EIRMP000000412-22, and EIRMP000000161-29

Organization: Senator Murkowski, Alaska Miners Association, Fairbanks Chamber of Commerce, Citizen's Advisory Commission on Federal Areas, and Alaska Department of Natural Resources

Commenter Type: Congressional Delegation, mining organization, Business Organization, state advisory committee, and state government

Summary

- ACEC designation violates ANILCA section 101(d) and 1326.
- Sections 101(d) and 1326 of ANILCA require that no more federal land be administratively set aside specifically for conservation purposes, therefore, the BLM should not manage any lands in the planning area specifically to protect wilderness-like qualities. Keeping BLM lands open to multiple use will not significantly reduce the wilderness-like qualities because these lands are remote and will remain largely undeveloped even if open to potential resource development well into the foreseeable future. Currently 99% of the planning area retains wilderness-like qualities despite having been available for mining between the 1880s and 1969. Federal lands should only be managed for wilderness-like qualities if those lands are so designated by statute.
- Should any of the proposals in the plan constitute new closures or withdrawals of the planning area to mineral entry or the application of the public land laws, ANILCA Section 1326(a) applies.

Response

An ACEC is an administrative designation under FLPMA, not a congressionally designated national conservation system unit (e.g., Wild and Scenic River, designated Wilderness, National Historic Trail) as described in sections 101(d) and 1326(b) of ANILCA. ACECs do not preempt ANILCA provisions that apply to ANILCA conservation system units. If an ACEC overlays a conservation system unit, applicable provisions of ANILCA still apply. Any recommended withdrawals from mineral entry would comply with the process in section 1326(a).

The Proposed RMP (Alternative E) identifies lands that would be managed to emphasize other resource values and multiple use while applying management restrictions to reduce impacts to wilderness characteristics. Like all public lands, they will be managed by the BLM in accordance with land use plans and all applicable provisions of law, the arrangement that Congress presumed in ANILCA Section 101(d) when it deemed its "designation and disposition of the public lands in Alaska" to afford "sufficient protection," and represent "proper balance." No new conservation-system units, national conservation areas, or national recreation areas will be established by the RMP.

ANILCA section 1326(a) would apply to any new withdrawals. Modification of existing Congressional withdrawals such as those under ANILCA or the Wild and Scenic Rivers Act is outside the scope of the RMP. The Proposed RMP (Alternative E) recommends retaining existing ANCSA withdrawals until new withdrawals under the authority of FLPMA can be established. Appendix G and maps 90-93 provide more detailed discussion on this topic.

L.4.27.10. ANILCA and Wildlife Management

Comment Number: EIRMP000000170-57

Organization: Alaska Department of Natural Resources

Commenter Type: state government

Summary

The RMP mischaracterizes the requirements of ANILCA in regards to wildlife management and healthy populations. The State of Alaska manages for the sustainability of all fish and wildlife; sustainable populations are logically viable and healthy populations. However, ANILCA did not mandate management for healthy populations as stated in section 3.2.4.2.1 of the Draft RMP, but rather confirmed State authorities regarding wildlife management and required the Secretary to assure that subsistence uses are consistent with “the conservation of healthy populations of fish and wildlife.” (ANILCA Section 802(1)).

Response

Wording was changed to indicate that in ANILCA Title VIII Section 802(1) Congress declared it to be policy that "consistent with sound management principles, and the conservation of healthy populations of fish and wildlife, the utilization of the public lands in Alaska is to cause the least adverse impact possible on rural residents who depend upon subsistence uses of the resources..."

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Appendix M

Supplement to the Draft Resource Management Plan

Appendix M. Supplement to the Draft RMP

M.1. Introduction

Introduction

The Bureau of Land Management (BLM) published a Notice of Availability of the Eastern Interior Draft Resource Management Plan and Environmental Impact Statement (RMP/EIS) in the *Federal Register* on February 24, 2012 (77 FR 11154). The Environmental Protection Agency published its Notice of Availability of the Draft RMP/EIS in the *Federal Register* on March 2, 2012 (77 FR 12835), beginning a 150-day public comment period. The Draft RMP/EIS considered hardrock mineral leasing in the White Mountains National Recreation Area (NRA) as an alternative considered but not analyzed in detail (section 2.3 of the Eastern Interior Draft RMP/EIS).

When preparing the Draft RMP/EIS, the BLM understood the provisions under the Alaska National Interest Lands Conservation Act (ANILCA) for hardrock leasing in the White Mountains NRA (implemented by 43 CFR 3585) to apply only to removal of hardrock minerals from mining claims that existed before November 16, 1978. Since there are no longer any mining claims of record within the NRA, it was thought that no one could meet the requirements to lease hardrock minerals. This interpretation was incorrect, as the BLM, through its regulations at 43 CFR part 3580, has interpreted Section 1312 of ANILCA as allowing for disposal of hardrock minerals by lease in the White Mountain NRA even in the absence of an underlying unperfected mining claim, subject to certain findings by the Secretary.

To analyze an adequate range of alternatives and obtain public comment on hardrock mineral leasing in the White Mountains NRA, the BLM issued this Supplement to the Eastern Interior Draft RMP/EIS. This Supplement amends Alternative D to include the hardrock mineral leasing scenario. This alternative would recommend making approximately 160,000 acres in the White Mountains NRA available for hardrock mineral leasing. This Supplement describes the additions to Alternative D and environmental effects associated with the hardrock mineral leasing scenario. Only after receiving, reviewing, and considering public comment, will the BLM decide whether or not to recommend opening the NRA to hardrock mineral leasing as a feature of the agency preferred alternative in the Proposed RMP/Final EIS.

In this document, a hardrock mineral leasing program refers to issuing exploration licenses and mineral leases for the exploration and development of known deposits of placer gold and rare earth elements. Both gold and rare earth elements are locatable minerals normally only available through mining claims. As discussed above, however, ANILCA allows for leasing hardrock minerals in the White Mountains, but not for the location of new mining claims. Mineral leasing is done by a lease sale at the discretion of the BLM. Leases are for a defined term, a royalty is charged, and the lease may contain leasing stipulations at the time of the lease sale.

Pursuant to Section 810 of ANILCA, the BLM evaluated the effects of the revised Alternative D presented in this Supplement on subsistence activities and determined that there may be a significant restriction on subsistence uses. These findings are located in Appendix B of this document. The BLM will hold public hearings related to Section 810 findings in conjunction with public meetings on the Supplement. The BLM will announce notice of specific dates and locations for public meetings and ANILCA hearings, through public notices, media releases, and/or mailings.

Background

Section 1312 of ANILCA (16 U.S.C. 460mm-4) withdrew the lands within the White Mountains NRA from location, entry, and patent under the Mining Law of 1872, but allows the Secretary to “permit the removal of the nonleasable minerals” from these lands, provided the Secretary makes a finding that such disposition would not have significant adverse effects on the administration of the NRA. The BLM interprets Section 1312 as allowing for the disposal of previously locatable minerals (such as gold) within the NRA by lease, as described in its regulations at 43 CFR part 3580, subpart 3585. Pursuant to land use plan decisions, BLM lands can be opened to mineral leasing and development when “such use and development would be compatible with, or would not significantly impair, public recreation and conservation of the scenic, scientific, historic, fish and wildlife or other values contributing to public enjoyment” (43 CFR §3585.1).

The existing White Mountains Resource Management Plan (BLM 1986) recommended opening approximately 44 percent of the NRA to leasing of hardrock minerals. This decision was never implemented.

In April 1986, the BLM issued a final rulemaking in the *Federal Register* revising the provisions of 43 CFR part 3500 concerning the leasing of solid minerals. Included in this rulemaking were regulations allowing for hardrock mineral leasing in the White Mountains NRA.

A U.S. Bureau of Mines (Fechner and Balen 1988) assessment of the placer resources in the White Mountains documented economically recoverable quantities of placer gold in the Nome and Beaver Creek drainages. Many of the areas known placer deposits were under claim at the time of withdrawal. These claims have since lapsed, and due to the withdrawal, no new claims could be staked. The deposits identified by the U.S. Bureau of Mines and those once under claim, have not seen significant development activities since the establishment of the White Mountains NRA in 1988.

Mapco Incorporated explored for uranium in the 1970s and found a high-grade rare earth element (REE) deposit hosted in granite at the headwaters of Roy Creek. Rare earth elements found in the area include lanthanum (La), praseodymium (Pr), Cerium (Ce), and neodymium (Nd). In this document, these rare earth elements are generally referred to as the Roy Creek REE deposit.

REEs are a set of 17 metals including the 15 lanthanides, yttrium, and scandium. Because of their geochemical properties, REEs are not often found in concentrated and economically exploitable forms. REEs are used in hybrid automobiles, wind turbine generators, and many high tech industrial and consumer products. During the past 20 years there has been a greatly increased demand for many of these products requiring REE. Only recently has there been an interest in REEs in the planning area since Chinese export restrictions have caused their price to spike. The known deposit of REE minerals in the White Mountains is restricted to a specific occurrence of granite mapped in the Roy Creek area.

M.2. Alternatives

This Supplement modifies the Eastern Interior Draft RMP/EIS by adding the following decisions to Alternative D for the White Mountains Subunit (BLM 2012a, section 2.8.2.3). All alternatives are described in more detail in the Eastern Interior Draft RMP/EIS (BLM 2012a).

Alternative D

Alternative D for the White Mountains Subunit of the Eastern Interior Draft RMP/EIS would include the following decisions:

Approximately 160,000 acres in the White Mountains NRA would be recommended open for leasing of hardrock minerals (Figure M.1).

- 64,000 acres of lands with known placer deposits of gold and high development potential would be open for leasing. Competitive leases issued in Quartz Creek will contain stipulations requiring mining by suction dredging only;
- 85,000 acres of lands with known placer deposits of gold and medium development potential would be open for leasing; and,
- 11,000 acres of lands with known deposits of four rare earth elements, lanthanum (La), praseodymium (Pr), Cerium (Ce), and neodymium (Nd), would be open for leasing.

The Required Operating Procedures (ROPs) and Leasing Stipulations in Appendix A of this document would apply to hardrock mineral leasing and exploration licenses. The BLM has the authority to include special lease stipulations for the protection of the surface, its resources and use for recreation (43 CFR 3585). The BLM would use this authority to develop additional lease stipulations as appropriate at the time of a lease sale or approval of an exploration license.

This Supplement changes only Alternative D. Alternative D is not the Agency Preferred Alternative. The other alternatives are:

Alternative A (No Action Alternative)

The White Mountains NRA would remain closed to hardrock mineral leasing. Although the White Mountains RMP (BLM 1986) recommended opening the Semi-Primitive Motorized Unit (428,000 acres) to leasing of hardrock minerals, this decision was never implemented.

Alternatives B and C (Agency Preferred Alternative)

No lands within the White Mountains Subunit would be recommended open to leasing of hardrock minerals.

Table M.1. Hardrock Mineral Leasing White Mountains Subunit: Summary of Alternatives

Program	Alternative A (No Action)	Alternative B	Alternative C (Agency Preferred)	Alternative D
Hardrock mineral leasing	0 acres open			160,000 acres open to leasing

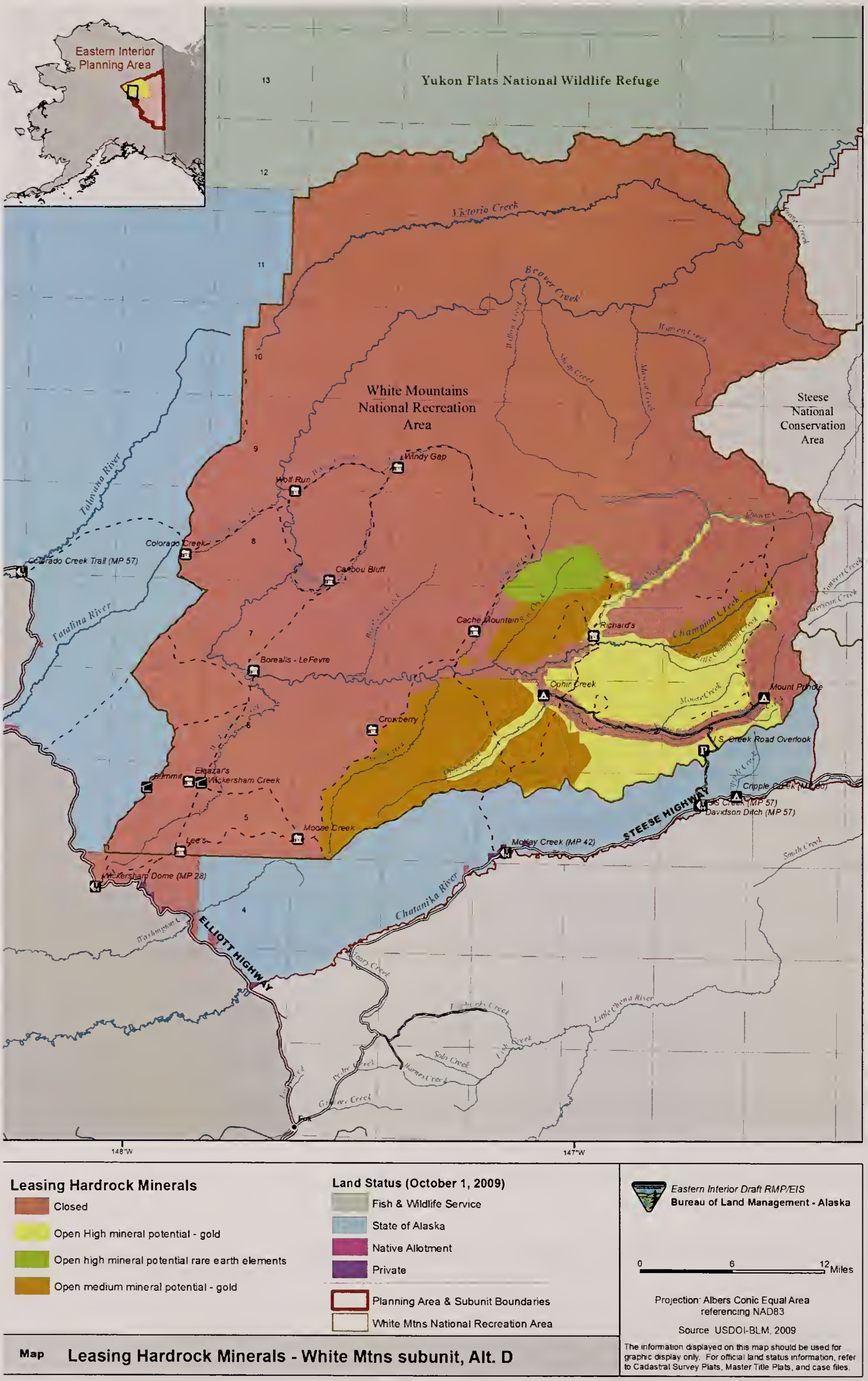

Eastern Interior Planning Area
Yukon Flats National Wildlife Refuge
White Mountains National Recreation Area
Steese National Conservation Area
Victoria Creek
Beaver Creek
Tolovana River
Tatalina River
Chatanika River
Champion Creek
Moose Creek
Windy Gap
Wolf Run
Colorado Creek
Colorado Creek Trail (MP 57)
Caribou Bluff
Cache Mountain
Richard's
Borealis - LeFevre
Ophir Creek
Mount Prindle
Crowberry
Elbazar's
Wickersham Creek
Summit
Moose Creek
Lee's
Wickersham Dome (MP 28)
McKay Creek (MP 42)
U.S. Creek Road Overlook
Cripple Creek
U.S. Creek (MP 57)
Davidson Ditch (MP 57)
STEESE HIGHWAY
ELLIOTT HIGHWAY
148°W
147°W
Leasing Hardrock Minerals
🟥 Closed
🟨 Open High mineral potential - gold
🟩 Open high mineral potential rare earth elements
🟧 Open medium mineral potential - gold
Land Status (October 1, 2009)
Fish & Wildlife Service
State of Alaska
Native Allotment
Private
Planning Area & Subunit Boundaries
White Mtns National Recreation Area
Eastern Interior Draft RMP/EIS
Bureau of Land Management - Alaska
0 6 12 Miles
Projection: Albers Conic Equal Area referencing NAD83
Source: USDOI-BLM, 2009
The information displayed on this map should be used for graphic display only. For official land status information, refer to Cadastral Survey Plats, Master Title Plats, and case files.
Map Leasing Hardrock Minerals - White Mtns subunit, Alt. D

Figure M.1. Alternative D Hardrock Mineral Leasing Areas

M.2.1. Summary of Impacts

The following table summarizes the impacts in Alternative D with the addition of hardrock mineral leasing. For a summary of impacts of other programs and alternatives, see section 2.9 of the Eastern Interior Draft RMP/EIS (BLM 2012a).

Table M.2. Summary of Impacts

Program or resource	Alternatives A–C	Alternative D
Cultural and Paleontological Resources	None	Possible disturbance to historic and prehistoric sites. Increased access to areas open to hardrock mineral leasing increases potential for both inadvertent and intentional damage to resources.
Fish and Aquatic Species	None	Suction dredging has been shown to locally reduce benthic invertebrates; cause mortality to early life stages of fish; destabilize spawning and incubation habitat; remove large roughness elements such as boulders and woody debris; increase suspended sediment; decrease the feeding efficiency of sight-feeding fish; and, reduce living space by depositing fine sediment. Alternatively, suction dredging may temporarily improve fish habitat by creating pools or spawning gravels. Operations that do not alter streambank stability or adversely impact riparian and stream channel function, are likely to be minimal and of short-term duration (less than or equal to five years). Placer mining can negatively affect fish and aquatic resources by degrading or eliminating aquatic habitat; reducing available food sources and water quality; reducing available pool habitat; eliminating riparian vegetation and function; creating sparsely vegetated valleys and floodplains with slow rates of natural revegetation and unstable stream channels with highly erodable beds and banks; altering the longitudinal slope, geometry, and sediment transport rates in streams; and, creating undersized or absent floodplains. Placer mining may directly affect an estimated eight miles of stream. With ROPs and good conditions, streams would trend toward a functional, but altered, habitat within five to ten years after reclamation. Mechanized placer mining within the headwaters of Beaver Creek Wild and Scenic River (WSR) may affect water quality, the recreational grayling fishery in Beaver Creek, and Beaver Creek Chinook (a BLM Alaska Watch List species).
Non-native Invasive Plants	None	Mineral leasing and associated access would increase the likelihood of the introduction, establishment, and spread of nonnative invasive plants (invasive plants). Indirect impacts would result where invasive plants become established due to hardrock exploration development, including potentially long-term changes in plant community structure and diversity and wildlife habitat degradation. Costs include long-term monitoring and control. Containment and control of invasive plants may include further soil disturbance and the application of herbicides, also for the long-term. ROPs and Leasing Stipulations (Appendix A) would reduce the level of impact.

Program or resource	Alternatives A–C	Alternative D
Soil and Water Resources	None	Placer mining can have an adverse effect on the structure of the existing soil profile by stripping of overburden and riparian/wetland vegetation. There is an irretrievable loss of any soil that enters waterways and is transported downstream. The primary impact to water quality is an increase in sedimentation and turbidity. Some direct effects on water quality can be anticipated during the development stage of an operation, resulting in short-term increases in sediment levels and turbidity while equipment operates near or in the active stream channel. It is likely that occasional high water or failure of water control structures would introduce sediments collected by the water treatment system into the stream channel, resulting in short-term increases in turbidity and sediment load levels and possible localized sedimentation of the stream substrate. Stream channel morphology would be directly affected in all areas where activities associated with mining occur in the active channel. Indirect impacts to water quality would occur through non-point source erosion from disturbed areas directly adjacent to stream channels. Channel readjustment would occur where the active channel was modified. These processes increase suspended sediment into the stream system, particularly during spring break-up and floods. Impacts to soil and water resources could be expected to decrease after cessation of mining, successful revegetation, and channel stabilization. Reestablishing vegetation on placer waste rock piles may take decades. All placer mine operations would be required to recycle turbid water through settling ponds to prevent high turbidity discharge into streams and to reclaim disturbed stream channels and riparian areas. It is anticipated that turbidity as a result of direct and indirect discharge from placer mine operations would meet ADEC water quality standards. ROPs shown in Appendix A would be implemented to reduce impacts to soil and water resources.
Special Status Species	None	Wetland, riparian, and aquatic habitats support most BLM Alaska sensitive animal species. Most sensitive plant species occur on the uplands. Exploration for rare earth elements may affect sensitive plant species. Placer mining and associated changes in access could result in substantial local impacts to riparian and aquatic habitats and species. Hardrock leasing would impact individuals of some BLM Alaska sensitive species. The distribution of most of these species is not well-known. Implementation of ROPs (Appendix A) would reduce impacts. It is not anticipated that hardrock mineral leasing would trend any sensitive species toward federal listing.
Vegetation	None	Native vegetation, mostly riparian and wetland habitats, would be lost on an estimated 661 acres. Times to reestablish vegetative cover would vary widely. Some areas would remain unvegetated for several to many years. Areas with adequate fine and organic soil materials and viable seed and vegetative plant parts would revegetate relatively quickly. ROPs requiring vegetation cover to meet pre-determined standards would result in faster revegetation. Riparian areas where a stable stream channel was not established would remain largely unvegetated until the channel stabilizes. Loss of fines and organic material through flooding and shifting channels can delay revegetation for decades. Roads and trails developed for access would disturb an undetermined area of native vegetation and supporting soils. Heavy, season-long use may result in significant loss of vegetation and degrading of soils in a variety of vegetation types. Additional disturbance would occur by expansion of this network of roads and trails by recreational users. Much of the hardrock leasing area burned in 2004 and soils and vegetation may be more susceptible to impacts from motorized use.

Program or resource	Alternatives A–C	Alternative D
Visual Resources	None	Eighty-four percent of the White Mountains NRA would be closed to mineral leasing including Beaver Creek WSR, research natural areas, and reclaimed areas along Nome Creek, protecting visual resources in these areas. Visual resources would be affected within the 160,000 acres open to mineral leasing. Surface disturbing activities associated with exploration and mining, such as drilling, trenching, access trails, removal of vegetation and stockpiling of materials, would impact line, form, color, and texture of mined areas creating contrast between mined areas and background landforms. These activities may attract the attention of the casual observer from various distances. Large-scale placer mining would have the greatest impact to visual resources. Small-scale placer mining would have similar impacts, but at a smaller scale. Movement of materials from dredging occurs underwater and thus does not have a noticeable impact on visual resources. Suction dredging camps would impact visual resources on less than six acres annually. Mineral exploration activities would impact visual resources on an estimated 70 acres.
Wildlife	None	Mineral leasing activities and associated access would result in disturbance of more than 661 acres of terrestrial wildlife habitat. Much of this disturbance would occur to riparian areas and wetlands habitats which are typically high-value wildlife habitats. Effects on these habitats would extend, to some extent, downstream into Beaver Creek WSR. Human activities associated with mines would reduce use of riparian habitats by many wildlife species in the immediate vicinity of the activity. Changes in access and resulting increases in human use of the area may have a greater effect on wildlife and their habitats than direct habitat disturbance. In general, motorized access would increase throughout the leasing area. Human use of additional access to sheep habitats in the Upper Champion Creek and Quartz Creek area may reduce sheep use of those habitats. Moose may benefit from some ground disturbances that result in growth of deciduous browse species. Increased hunting pressure and harvest in previously remote areas would likely reduce harvest in areas with already-established access, such as Nome Creek. Hunting pressure may result in some displacement of moose from high-density rutting areas. Most of the habitat disturbance would occur within the historical calving range of the Fortymile caribou herd and current calving area of the White Mountains caribou herd. The greatest impact to caribou would likely be the change in access, human infrastructure, and the generally increased levels of human activity in the area. Although placer mining operations may have little direct effect on caribou use of the area, the combined direct and indirect effects from changes in access and human use patterns would likely reduce the suitability of the area as calving habitat and potentially reduce the likelihood that the Fortymile Herd would reestablish a habit of calving season use of the White Mountains. Compared with other large migratory caribou herds, the Fortymile herd's current annual range has a low proportion of range above treeline (17%; Boertje et al. in press). Boertje and others (in press) surmised that overgrazing of the herd's current core upland tundra habitat may have resulted in reduced herd nutrition levels and suggested that expansion to additional spring and summer upland tundra in the White Mountains may be of key importance to realizing continued herd growth. Several species of migratory birds are dependent on (or found in much higher densities in) riparian habitats. Placer mining would remove habitat for these species in localized areas and habitat recovery may require several decades.

Program or resource	Alternatives A–C	Alternative D
Recreation and Travel Management	None	Direct impacts to recreation include visual impacts, short-term user conflicts, exhaust, and noise impacts. In contrast to the short-term noise and exhaust produced by a passing motorized vehicle, noise and exhaust from suction dredging and mechanized placer mining would persist for hours. Some recreation visitors anticipating a backcountry experience may be displaced. Buffers around BLM cabins and Nome Creek would help reduce impacts from noise in these areas. Occupancy of mining equipment and related operations may last for 90 days per operation and displace some recreation users. Proper location of camps and staging areas could reduce this impact. Views of mining activity would be visible from ridge tops (e.g., Table Top Trail). The visual resource management ROPs (section M.4.2.11) would help reduce visual impacts. Increased turbidity, inherent with mining activities, would reduce the aesthetic appeal of Beaver Creek and influence the floating experience by boat floaters. Beaver Creek supports a popular grayling fishery. Fishing success would decrease in muddy water and displace some users. River hazards are more difficult to identify in muddy water, increasing floating difficulty. Access routes to leases could benefit other users if constructed in the proper locations using sustainable trail construction techniques. Roads and trails associated with mining would be attractive to motorized recreation users. While contributing to greater access by the motoring public it would also greatly expand the proliferation of user-made trails and multiple routes to the same location. Mobilization of mining equipment on existing trails would require the trails to be widened possibly attracting use of vehicles larger than allowed by current OHV regulations. Increased summer use on winter trails would make winter trail maintenance difficult and reduce the quality of the trails for winter uses. Indirect effects from road construction include the reclamation of road beds after the life of the mine or the maintenance and redevelopment of sustainable road infrastructure by the BLM, requiring additional expense and maintenance beyond the life of the plan. Direct effects to recreation may be short-term and could be mitigated. The access needs and infrastructure associated with mining would increase the proliferation of user-created trail networks in a heavily used area. The proximity to Fairbanks and growing popularity of the area, coupled with the existing recreational facilities would have a cumulative adverse effect on the administration of the recreational area and may result in increased maintenance cost for BLM.
Subsistence	None	Impacts include user conflicts, displacement of resources, and potential declines in resource availability due to disturbance in critical habitats (spawning) or during critical times (e.g., calving periods). Minimal direct impacts to subsistence wildlife resources or uses would occur from hardrock mineral leases and exploration licenses because of seasonal restrictions on activities in Dall sheep lambing and caribou calving habitats. Indirect impacts are expected to be greater and more difficult to mitigate. Increased access to largely remote wildlife habitat is expected to occur. The resulting increase in non-mining activities may cumulatively reduce the suitability of the areas for calving and postcalving. Data indicates that current calving and postcalving range for the Fortymile caribou herd has been diminished from overgrazing and limited suitable habitat is available. The research indicates that habitat in the White Mountains would become increasingly important to continued growth and stability of the Fortymile herd (Boertje et al. in press). Analysis of indirect impacts to Fortymile caribou from mineral leasing resulted in a finding of may significantly restrict subsistence use of Fortymile caribou (Appendix B). Some conflicts with federal subsistence hunters may occur from mid-August through September and from November through March if exploration and

Program or resource	Alternatives A–C	Alternative D
		placer mining is active during these time periods. Access by subsistence hunters may be restricted due to perceived or real barriers to wildlife resources, displacing hunters to other areas. Caribou are generally distributed over a wide area, thereby minimizing access issues for subsistence hunting. Moose are available through the greater area and much of the rural resident harvest of moose occurs outside the area open to mineral leasing. Conflicts among hunters would not be expected to be significant. Spawning areas for Chinook salmon have been identified within Ophir Creek. Because active mining is likely to occur in and adjacent to these spawning areas, direct impacts on this population are expected. Indirect impacts to subsistence fish species and water quality may occur downstream due to turbidity, crossing of streams, high water events and occasional failure of settling ponds. These impacts would likely be short-term. Regulations and ROPs that require recycling of turbid water through settling ponds and reclamation of disturbed stream channels should mitigate most of these impacts.
Economic	No additional positive economic effects.	Exploration and leasing for placer gold and rare earth mineral exploration would result in positive economic effects. The total mining employment on BLM-managed lands would be estimated at 84 part-year workers. The full-time equivalent in the White Mountain Subunit would be approximately 35 workers, based on the Stebbins (2009) models. Total employment by the Alaska minerals industry in 2008 was 3,392 full-time equivalent jobs (Szumigala et al. 2009). The statistics indicate less than one percent of the statewide industry employment on BLM-managed lands would occur at White Mountain operations. The DGGS reported the average monthly wage for mining in Alaska during 2010 at $8,345. White Mountains gold mining operations account for approximately $3 million in wages, annualized.
Environmental Justice	None	Minority and low income populations would not be disproportionately impacted. Minority or low income populations in the Fairbanks area may benefit from employment in the recreation and mining industries. New mining leases and mineral exploration could result in additional employment accruing to local populations. Possible negative impacts to environmental justice populations and the entire population of the area include loss of employment in another existing industry due to mining development. However, there are no commercial activities in the area potentially opened to mining under Alternative D providing employment that will be affected.

M.3. Affected Environment and Environmental Consequences

The following sections describe the environmental consequences that would occur due to hardrock mineral leasing in Alternative D. There would be no impacts associated with hardrock mineral leasing under Alternative A (No Action Alternative), Alternative B, or Alternative C. Therefore, these alternatives are not discussed any further.

M.3.1. Assumptions for Analysis

This section describes the assumptions used for analysis of impacts and the level of exploration and development that is reasonably foreseeable during the life of the plan in Alternative D.

M.3.1.1. Alternative D

The following information is summarized from the *Eastern Interior RMP Reasonably Foreseeable Developments for Locatable Minerals and Leasable Hardrock Mineral Resources in the White Mountains Subunit* (BLM 2012b) which is incorporated by reference. In the reasonably foreseeable development scenario (RFD) the BLM developed models for typical suction dredging, small placer, and large placer operations, describing acres of annual disturbance, size of the crew, hours of operation, fuel requirements, and type of equipment used for each type of operation. These same models were used for the analysis of hardrock mineral leasing. This analysis assumes that development under mineral leases would occur in a similar manner to development under the 3809 regulations (43 CFR 3809).

In accordance with the regulations for hardrock leasing (43 CFR 3500), the BLM envisions the following potential developments:

1. The BLM would offer competitive leases for known deposits of placer gold in areas with high development potential (64,000 acres).
2. In the areas of known deposits of placer gold with medium development potential (85,000 acres), the BLM could issue exploration licenses based on public interest, likely leading to additional placer leases.
3. The BLM could issue exploration licenses based on public interest in the Roy Creek known REE deposit (11,000 acres). It is unlikely that any lode mineral occurrences explored under a license would move to a production lease within the anticipated twenty-year life of this plan.

Methodology for Estimation of Mining Activities

To estimate the types and number of mining-related activities that might occur in the White Mountains if known mineral deposits were made available for leasing, the BLM compared State of Alaska land of a similar nature in the Steese Subunit. For every 7,000 acres of state land in the Steese, there is one typical placer operation. There is one suction dredge operation for every six miles of dredgable stream on high development potential areas of the Steese. These ratios are applied to areas of known mineral deposits in the White Mountains NRA to establish the number of anticipated mechanical placer mining leases, suction dredge leases, and both REE and placer exploration licenses over the life of this plan (Tables 3.1 and 3.2). Tables 3.1 and 3.2 include only acreage that can be directly estimated. Surface disturbance due to access routes was not estimated.

Access Assumptions

In order to reduce impacts, access would generally be limited as follows:

- Helicopter access for exploration licenses in the Roy Creek REE deposit;
- No construction of roads for exploration licenses;
- Winter overland moves for heavy equipment;
- Summer access by all-terrain vehicle (ATV), consistent with off-highway vehicle (OHV) designations for Alternative D (limited to 1,000 pounds curb weight and 50 inches width). The BLM could approve heavier vehicles, such as utility terrain vehicles (UTV), on a case-by-case basis. The BLM would determine access routes to mining locations off current BLM-managed recreational trails on a case-by-case basis. Seasonal restrictions may apply;
- Aircraft (helicopter or fixed-wing); and,

- The BLM could consider construction of new access roads for placer development on a case-by-case basis if consistent with recreation management objectives and if other access was not feasible. The BLM estimates up to 20 miles of roads could be built over the life of the plan.

Leases

The BLM may issue a competitive lease on unleased lands where a known valuable mineral deposit exists. This lease is accomplished through a competitive lease sale. There are two types of leases applicable to hardrock mining in the White Mountains NRA, and they are described in more detail below.

Suction Dredge Placer Leases: In addition to the mechanical operations described below, the BLM estimates there would be 10 suction dredge operations on lands with high placer development potential and one additional operation on lands with medium development potential. A suction dredge operation is limited to within active steam margins and would disturb about one-half acre per year. The maximum potential disturbance from all 11 operations for the twenty-year life of the plan with natural concurrent reclamation is 84 acres.

Mechanized Placer Leases: To estimate the effects of development of traditional placer mining operations, the BLM considered two mining models: a smaller mobile placer operation using a small dozer and excavator feeding an 11 cubic yard-per-hour washplant and a larger 145 cubic yard-per-hour “Kantishna-type” washplant supported by a larger excavator and track-dozer. A small operation would mine and reclaim one acre per year, but have a continual 4.4 acres of disturbance per year for a total disturbance of 27 acres for the life of this plan. A large operation would have a continual 20 acres of disturbance and a total disturbance of 107 acres over the life of this plan. The BLM estimates there could initially be two large and eight small operations annually, with an additional three small operations following work done under exploration licenses, for a total disturbance of 507 acres over the life of the plan.

Exploration Licenses

An exploration license allows the applicant to explore known mineral deposits to obtain geologic, environmental, and other pertinent data concerning the deposits. The application for an exploration license includes an exploration plan approved by the BLM that becomes part of the license. The requirements for an exploration plan are described in 43 CFR 3505.45. A proposed notice of exploration must be published, inviting others to participate in the exploration under the license on a pro-rata basis. Applications for exploration licenses would be subject to site-specific analysis under the National Environmental Policy Act (NEPA). Site-specific measures to protect the environment and use for recreation would be included in the approved exploration license. There are two types of licenses applicable to hardrock mining in the White Mountains NRA, and they are described in more detail below.

Placer Exploration Licenses: The BLM may require exploration of placer resources in the medium development potential areas prior to issuing placer leases; the applicant may request exploration licenses in the higher development potential areas before the BLM offers competitive leases. Most placer exploration would cause minimal disturbance, but the applicant could also request approval for more intensive placer sampling with heavy equipment. The BLM anticipates there could be four exploration licenses (5,000 acres each) requested within the lands opened to leasing, resulting in direct disturbance to and reclamation of 20 acres over the life of the plan.

Rare-Earth Element Exploration Licenses: If the White Mountains NRA were opened to hardrock leasing, there would likely be an exploration license request for the 11,000 acres in the Roy Creek REE known deposit. Exploration activities would range from field mapping and sampling, to trenching and core-drilling. The total life-of-plan disturbance from exploration of the Roy Creek REE deposit is expected to be 50 acres.

Table M.3. Anticipated Activity Due to Hardrock Leasing in the White Mountains Under Alternative D

Activities under Reasonably Foreseeable Exploration and Development	High Potential Lands – Gold	High Potential Lands - REE	Medium Potential Lands – Gold	Total
# Suction dredge placer leases	10 leases		1 lease	**11**
Life of plan disturbance due to suction dredging (active stream channel only)	76 acres		7.6 acres	**84 acres**
# Mechanized placer leases	2-large leases 8-small leases		3- small leases	**13 leases**
Life of plan disturbance due to mechanized placer mining (uplands/floodplains)	427 acres		80 acres	**507 acres**
Total lease disturbance (20 years)	**503 acres**		**88 acres**	**591 acres**
Acres open to leasing	**64,000 acres**	**11,000 acres** [a]	**85,000 acres**	**160,000 acres**

[a] No production leases anticipated during the life of the plan.

Table M.4. Anticipated Activity Associated with Exploration Licenses in the White Mountains Under Alternative D

Activities under Reasonably Foreseeable Exploration and Development	High Potential Lands Lode REE	Medium Potential Lands – Placer Gold	Total
# Placer exploration licenses		4	4
Area licensed for placer (acres)		20,000	20,000
Acres of disturbance due to placer exploration licenses		20	20
# Lode exploration licenses	1		1
Area licensed (acres)	11,000		11,000
Acres of disturbance due to lode exploration licenses	50		50
Total disturbance from exploration licenses (20 years)	**50 acres**	**20 acres**	**70 acres**

M.3.2. Affected Resources

M.3.2.1. Cultural and Paleontological Resources

Affected Environment

Placer gold prospecting and mining has occurred in some drainages in the White Mountains NRA for more than 100 years. The specific areas outlined in Alternative D equate to areas of known historic mineral activity. Non-systematic archaeological surveys in these areas have found historic mining sites immediately adjacent to portions of all creeks addressed in this alternative. Similarly, Alaska Native prehistoric sites have been found along two of the creeks in this alternative, in spite of the almost complete lack of archaeological surveys aimed towards finding such sites in the project area. There are almost certainly more such sites.

Environmental Consequences

Section M.3.1 of this appendix describes the nature of the proposed hardrock mineral leasing. Alternative D outlines disturbance of up to: 507 acres by mechanized placer mining operations, 70 acres from the issuance of exploration licenses, and 84 acres by suction dredging in and alongside specified creeks (including Ophir, Bear, Trail, Quartz, Champion, and Little Champion creeks).

Surface disturbing activities, including mining and exploration activities outlined here, directly and adversely impact cultural and paleontological resources. Disturbance to prehistoric sites by any particular mining or exploration operation would need to be assessed on a case-by-case basis. Their locales on the landscape are a bit more predictable than are historic mining sites. In sum, hardrock mineral leasing would likely directly and adversely impact all manner of surface and buried cultural and paleontological resources.

Similarly, new access roads might be authorized to reach future valid mineral leases. New road construction has a direct and adverse effect on cultural and paleontological resources. It also has an indirect effect when new users (such as recreators, hunters, and those interested in procuring forest and woodland products) gain access to previously isolated lands. With more resource users accessing BLM-managed lands, the potential increases for more people finding surface cultural resources and adversely impacting them, whether intentional or not.

Cumulative Effects

Cumulative impacts to cultural and paleontological resources can occur through incremental degradation of the overall resource base. Excepting especially rare or unique sites, the destruction of any one, two, three, or more sites would likely not impact the overall, areal resource base, as there would probably be more of any similar type of site elsewhere in the planning area. However, cultural and paleontological resources are a non-renewable resource and the loss of any one of them is one less from a finite total. There would eventually be a point at which the cumulative overall destruction of sites would limit management options within any defined area, such as the planning area. Hardrock mineral leasing in the White Mountains would contribute to this cumulative effect.

Many low-level, seemingly minor impacts (such as walking or camping on a site) can slowly and cumulatively grow into a larger direct adverse effect over time. Similarly, visitors to sites often feel an urge to connect with the past by removing a piece of the site when they leave, like an artifact. Removal of a one, two, three, or more artifacts would not likely affect overall site interpretation. However, the point would come when enough artifacts are removed, that the cumulative removal would irreversibly affect any interpretations that can be made about that site. By promoting and increasing use and visitation upon public lands, hardrock mineral leasing may inadvertently adversely impact cultural and paleontological sites in this cumulative manner.

M.3.2.2. Fish and Aquatic Species

Methods of Analysis

Indicators: For aquatic resources, fish, and Special Status Species, the indicators used to identify the level of impact include water quality, riparian vegetation, streambank stability, and stream miles open to leasing of hardrock minerals.

Methods and Assumptions: Potential impacts on fish and aquatic resources are based on interdisciplinary team knowledge of the resources and the planning area. Impacts were identified using best professional judgement and were assessed according to the following assumptions:

- Healthy riparian areas are critical for properly functioning aquatic ecosystems. Improvements or protection of riparian habitats would indirectly improve or protect aquatic habitats and fisheries. Adverse impacts to riparian habitats would indirectly degrade aquatic habitats and fisheries;
- All of the anadromous streams or extent of anadromy within the area proposed for hardrock mineral leasing may not yet be identified;
- A hardrock mineral leasing program would result in an increased number of placer mining operations with the potential to adversely affect fish and aquatic resources, including BLM Alaska watch list species and the outstandingly remarkable fisheries value for Beaver Creek;
- All BLM land use authorizations would incorporate appropriate project design, Procedures, and mitigation to ensure no adverse long-term (greater than 20 years) impacts to water quality and aquatic habitats exist.
- The BLM would identify channel reconstruction activities. Reconstructed stream channels would be designed by an individual(s) trained and qualified for the task and the channel would be built as designed.
- Reclamation techniques would use an “adaptive management” approach to address potential problems allowing for corrective actions should they become necessary. These techniques would ensure applicable performance standards and required conditions are met at the conclusion of operations.
- The timeframes associated with long- and short-term impacts assume that channel equilibrium is maintained.

Affected Environment

A general description of fish and fish habitat within the planning area, including areas specific to Alternative D, is in section 3.2.4.1 of the Eastern Interior Draft RMP/EIS (BLM 2012a) and is incorporated by reference. The planning area supports 17 native fish species. None of these species are listed as threatened or endangered. With few exceptions, the current condition of fish species is good, and most fish populations are self-sustaining.

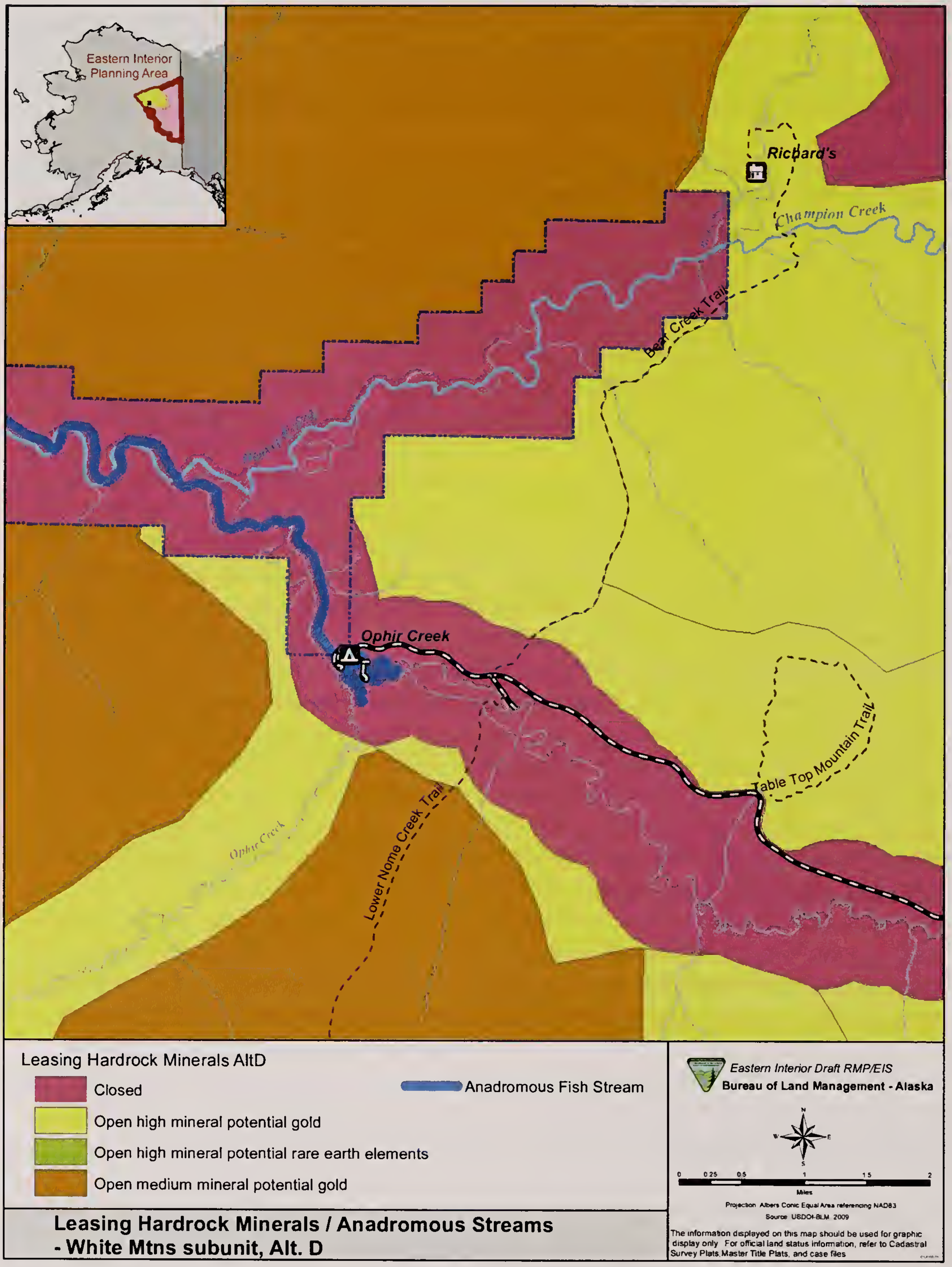
Approximately 160,000 acres are recommended open to hardrock mineral leasing in Alternative D, including 250 miles of headwater streams located in the southeast portion of the White Mountains NRA. These streams form the headwaters of Beaver Creek WSR (Figure M.1). These headwater streams are clear, rapid streams with long riffles, few pools, with an average width of 50 feet (Rhine 2005). The substrate generally consists of a gravel-cobble mixture (3 to 12 inches in diameter). Although some placer mining activity has occurred in headwater areas of Beaver Creek, most of these streams are thought to be in pristine condition, with the exception of Nome Creek. Nome Creek was heavily placer mined for gold from the early 1900s to the late 1980s.

Mining disturbed more than seven miles of stream and by the 1980s the floodplain was largely obliterated (Kostohrys 2007). From 1991 to the present, the BLM has been working to restore the floodplain, reestablish riparian vegetation, and maintain a single thread channel. The BLM has expended an estimated $450,000 on the Nome Creek reclamation project (USKH 2006).

Fish species found within the upper Beaver Creek watershed that are adjacent to or within areas recommended open to mining include Chinook salmon (*Oncorhynchus tshawytscha*), Arctic grayling (*Thymallus arcticus*), whitefish (*Coregoninae spp.*), and slimy sculpin (*Cottus cognatus*). Beaver Creek also supports regionally significant fish species which include small populations of coho (*O. kisutch*), and summer chum salmon (*O. keta*). The creek also supports moderate to high densities of Arctic grayling and northern pike (*Esox lucius*) which provide important recreational fishing opportunities. These populations of regionally significant fish species, unique concentrations of Arctic grayling, and the river's pristine habitat support BLM's identification of fish as an Outstanding Remarkable Value (ORV) for Beaver Creek (BLM 2012a, Appendix E).

The BLM monitored Beaver Creek Chinook salmon escapement from 1996 to 2000 and the data revealed a declining trend similar to the overall decline of Yukon River Chinook salmon (Volk et al. 2009). The Beaver Creek Chinook salmon escapement for these years ranged from 114 to 315 Chinook salmon. Although Beaver Creek Chinook salmon were designated as a BLM Alaska sensitive species in 2004 due to the downward trend of this small population, they were recently removed from that list and placed on a watch list. Since 2000, the Alaska Department of Fish & Game (ADF&G) has considered the Yukon River Chinook salmon stock as a *stock of yield concern* based on escapement performance, expected yields, and harvestable surpluses (Howard et. al. 2009). Beaver Creek Chinook are a component of the Yukon stock. Between 1996 and 2000, the overall Yukon River Chinook escapement range from the highest (about 300,000) to the lowest (about 100,000) dating back to 1982. Beaver Creek contributes a small percentage of the overall Yukon River Chinook salmon stock. The Yukon stock, however, is made up of numerous genetic stocks (such as the Beaver Creek stock) all of which are considered important to the overall health and viability of the stock.

The ADF&G Anadromous Water Catalog identifies Chinook salmon spawning and rearing in Beaver and Ophir creeks and Chinook spawning in Nome Creek (Figure M.2). Adult Chinook salmon in spawning condition have been observed at the confluence of Bear and Champion Creek (E. Yeager, pers. comm. May 15, 2012). That location is many miles farther upstream than what the Anadromous Waters Catalog identifies as the extent of anadromy. This reinforces ADF&G's assumption that approximately 50 percent of the anadromous streams or extent of anadromy have not yet been identified.


Eastern Interior Planning Area
Richard's
Champion Creek
Bear Creek Trail
Ophir Creek
Table Top Mountain Trail
Lower Nome Creek Trail
Ophir Creek
Leasing Hardrock Minerals AltD
Closed
Open high mineral potential gold
Open high mineral potential rare earth elements
Open medium mineral potential gold
Anadromous Fish Stream
Leasing Hardrock Minerals / Andromous Streams
- White Mtns subunit, Alt. D
Eastern Interior Draft RMP/EIS
Bureau of Land Management - Alaska
N
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0
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0.5
1
1.5
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Miles
Projection Albers Conic Equal Area referencing NAD83
Source USDOI-BLM 2009
The information displayed on this map should be used for graphic display only For official land status information, refer to Cadastral Survey Plats, Master Title Plats, and case files

Figure M.2. Map of Anadromous Streams in Headwaters of Beaver Creek

The excellent opportunity for Arctic grayling fishing was one of the values identified for establishing Beaver Creek as a component of the National Wild and Scenic Rivers System (BLM 1983). In 2000, the BLM and ADF&G performed an Arctic grayling study on the upper 30 miles of Beaver Creek, including the area between the confluence of Bear and Champion creeks and the confluence of Nome Creek (Fleming et al. 2001). This study estimated the population density of Arctic grayling at 1,325 per mile, which is higher than other studies on summer feeding populations in Alaska by as much as 44 percent. The study also revealed an increase in the size of grayling as the study moved upstream to the headwaters of Beaver Creek. This pattern was reinforced by other studies that found large male Arctic grayling migrating from downstream areas to Bear and Champion creeks during late May and June, while females and smaller males move into these areas during July and August (Rhine 1985). Within the upper 100 miles of Beaver Creek, the headwater streams (e.g., Bear and Champion creeks) have produced the largest and oldest Arctic grayling based on BLM and ADF&G fish sampling efforts and reports from recreational anglers (T. Dupont, pers. comm., May 22, 2012). This pattern reflects the generally accepted life-history paradigm for Arctic grayling that larger and older fish spend the summer feeding period in headwater areas and tributaries of rapid runoff rivers in Alaska (Armstrong 1982). Although Arctic grayling primarily use the headwater streams for summer feeding, some evidence of spawning has been observed (Rhine 1985; Kretsinger 1986) and may justify future inventory work.

Environmental Consequences

The effects on fish and aquatic habitats of mining (and exploration) for hardrock minerals in the White Mountains Subunit under mineral leases would be similar to those described for locatable mineral development in other parts of the planning area. These effects are described in section 4.3.1.4 of the Eastern Interior Draft RMP/EIS (BLM 2012a) and are incorporated by reference.

Suction dredging, a type of placer mining, can have both beneficial and adverse effects on fish and aquatic habitat depending on the timing and location of the activity.

Suction dredging has been shown to locally reduce benthic (bottom dwelling) invertebrates (Thomas 1985; Harvey 1986), cause mortality to early life stages of fish due to entrainment by the dredging equipment (Griffith and Andrews 1981), destabilize spawning and incubation habitat, remove large roughness elements such as boulders and woody debris that are important for forming pool habitat and that can govern the location and deposition of spawning gravels (Harvey and Lisle 1998), increase suspended sediment, decrease the feeding efficiency of sight-feeding fish (Barrett et al. 1992), and reduce living space by depositing fine sediment (Harvey 1986).

Conversely, suction dredging may temporarily improve fish habitat by creating deep pools or by creating more living space by stacking large non-embedded substrate (Harvey and Lisle 1998; Figure M.2). In dredged areas, invertebrates and periphyton are known to recolonize relatively rapidly, as long as the disturbance area is sufficiently limited to maintain populations of recolonizing organisms (Griffith and Andrews 1981; Thomas 1985; Harvey 1986). In addition, dredge tailings may increase spawning sites in streams lacking spawning gravel or streams that are armored by substrate too large to be moved by fish (Kondolf et al. 1991). In some cases, reduced visibility caused by elevated levels of turbidity can diminish the feeding efficiency of fish, while at the same time the reduced visibility may lessen the risk of predation (Gregory 1993).

Suction dredging operations within the Steese Subunit have been known to adversely impact streambank stability as well as riparian and stream channel function. Although disturbance to streambank and riparian habitats and alterations to the stream course is prohibited for suction dredging operations, in some cases these areas have been impacted. This type of activity results in an overwidened and shallow stream course, which is braided around stacked piles of large substrate. These impacts adversely affect riparian and stream function and if not reclaimed may persist for extended periods of time (years/decades) due to the amount of stream energy required to redistribute this large-sized substrate in the stream channel. It is assumed that these situations would be limited and that lease and license stipulations would minimize the level and duration of impacts to aquatic resources.

The anticipated number of suction dredging operations during the life of this plan is 11 (Table M.3). There would be 250 miles of stream open mineral leasing with an anticipated disturbance of 84 acres, or 14 miles of stream. Suction dredging operations are anticipated to disturb 22,000 cubic yards of stream gravel over the life of this plan or the equivalent of 2,200 typical (10 cubic yard) dump truck loads of stream gravel. Impacts from suction dredging operations that do not alter streambank stability or adversely impact riparian and stream channel function, and adhere to stipulations in the suction dredge permit, are likely to be minimal and of short-term duration (less than or equal to five years).

Mechanized Placer Leases – Conventional Mining

For Alternative D, fish and aquatic resources would be primarily affected by surface-disturbing activities which alter stream channels and floodplain connectivity, remove or impair riparian vegetation and function, or result in soil erosion and sedimentation to fish and aquatic habitat. These activities would include mechanized placer mining and associated road construction that occur within or adjacent to riparian areas or waterbodies.

Conventional mechanized placer mining involves the use of heavy equipment to access gold deposits. One method of mine development is to move the stream into a bypass channel, while the original stream channel is excavated for gold deposits. During this process the streambed, streambanks, and riparian vegetation are physically removed in order to access gold-bearing fluvial deposits which may extend to the bedrock. This method destroys the existing fish and aquatic habitat and eliminates all biological stream functions. Impacts to fish and aquatic resources can be severe and last for decades under the stream-altering bypass method (Tidwell et al. 2000, Arnett 2005, Viereck et al. 1993; Milner and Piorkowski 2004; BLM 1988 a, b, and c). Soil erosion from large surface disturbing activities (such as mechanized mining) often results in poor water quality and elevated turbidity levels harmful to fish and fish habitat far beyond the impact site. The River Management Plan for Beaver Creek National Wild River (BLM 1983c) stated that placer mining activities in the headwaters of Beaver Creek resulted in turbid water conditions as far as 30 miles downstream. Surface management regulations have since changed, in part to reduce adverse impacts to water quality from mining. The severity and duration of impacts are substantially reduced when mining operations occur outside of the stream channel and active floodplain.

The anticipated number of mechanized placer mining leases during the 20-year life of this plan is 13 (BLM 2012b). Approximately 250 miles of stream would be open to leasing for mechanized placer mining with an anticipated amount of disturbance of 507 acres. This disturbance would likely occur within floodplain areas and/or in the stream channel. In an attempt to quantify the number of stream miles that may be directly impacted by leasing, the length of a typical mining claim block (660 feet) from other subunits was used. The anticipated number of stream miles directly impacted by leasing would be eight miles. The likelihood of impacts would be greatest in the high development potential areas, which, contain more than half of the stream miles open to mechanized leasing.

If mining did occur, the ROPs specific to fish and aquatic species (Appendix A) would improve the likelihood of obtaining desired future conditions for aquatic habitats within an accelerated timeframe after reclamation. A range of success would be expected based on several factors.

These factors include baseline data collection, stream channel design/construction technique, the reclamation measures specified for the particular operation, the watershed characteristics, the capability of the site to revegetate, and the probability of experiencing a flood event prior to the reestablishment of riparian vegetation that is capable of dissipating stream energy and preventing erosion.

Assuming that baseline data is collected, reclamation is designed using the best available techniques such as those outlined in the Natural Resources Conservation Service's (NRCS, 2007) *Stream Restoration Design, National Engineering Handbook, Part 654*, and all of the factors previously mentioned are favorable, it is likely that instream habitats would rehabilitate within five years following reclamation. In these cases, impacts would be expected to be minor and short-term. However, stream channel design/reconstruction and aquatic habitat rehabilitation is very complex, especially within the planning area due to the harsh environmental conditions (such as short growing season, aufeis) and limited availability of hydrography data. Recognizing this complexity, a more realistic outcome may be a strong positive trend toward the desired habitat conditions within five to ten years under this management scenario. It would be essential that reclamation plans incorporate stream channel design based on channel forming discharge (typically a 1.5 year recurrence interval) and the floodplain be capable of transporting 100-year flood flows. This would minimize the chance of reclamation failure and the need for subsequent reclamation work by the operator.

In summary, placer mining can negatively affect fish and aquatic resources by degrading or eliminating aquatic habitat; reducing available food sources and water quality; reducing available pool habitat; eliminating riparian vegetation and function; creating sparsely vegetated valleys and floodplains with slow rates of natural revegetation and unstable stream channels with highly erodable beds and banks; altering the longitudinal slope, geometry, and sediment transport rates in streams; and, creating undersized or absent floodplains.

Mineral Exploration Licenses

It is anticipated that there would be four placer exploration licenses and one lode exploration license. Placer exploration licenses may encompass 20,000 acres with an anticipated disturbance and reclamation of 20 acres over the 20-year life of this plan. The impacts to fish and aquatic resources would vary depending on the location, type of exploration activities, and subsequent reclamation, all of which would be analyzed during a site-specific NEPA analysis prior to approval of exploration licenses and exploration plans.

Potential adverse impacts would likely be from surface erosion of disturbed soils and the destruction of riparian vegetation resulting in elevated turbidity levels and sedimentation to nearby water bodies. The effects of excess sediment and the removal of riparian vegetation to fish and aquatic resources is described in section 4.3.1.4.1 of the Eastern Interior Draft RMP/EIS, which is incorporated by reference. Although sediment is a natural part of the aquatic ecosystem, an increase in fine sediment has the potential to affect the availability of food, predator avoidance, immune system heath, and reproduction of fish and aquatic species. The ROPs (Appendix A) should reduce impacts from exploration to a negligible level with short duration given the anticipated level of disturbance from exploration activities. The larger the surface disturbance and the closer it is to the stream, the greater the severity and duration of the impact.

It is anticipated that one lode exploration license would be requested in the Roy Creek REE deposit, resulting in 50 acres of disturbance. While it is unlikely that fish or fish habitat studies have ever been performed in the headwaters of Roy Creek, it is reasonable to conclude that fish may not be present in the headwaters of this relatively small, high gradient stream. Direct impacts from lode exploration are not anticipated. Potential indirect adverse impacts from surface erosion would be similar to those described above for placer exploration activities.

Previous surveys in the Roy Creek area indicate that the soils are mainly of the granitic type (John Hoppe, pers. comm. May 10, 2012) that pose little threat to fish and aquatic life when disturbed and exposed to air and water. Although unlikely, if soils containing sulfide bearing ore were disturbed and exposed to air and water during exploration activities, acid mine drainage may occur and result in adverse indirect impacts to downstream waters. Acid mine drainage can cause physical, chemical, and biological degradation to aquatic habitat (Jennings et al. 2008). Predicting the risk of acid mine drainage at mine sites is often inaccurate (Jennings et al. 2008). It will be necessary to collect site-specific information variables and data to predict the potential for acid mine drainage in the Roy Creek area.

Outstandingly Remarkable Values and Watch List Species

As noted previously, the Arctic grayling fishery was one of the values identified when Beaver Creek was established as a component of the National Wild and Scenic Rivers System (BLM 1983c). Fish are currently proposed as an outstandingly remarkable value for Beaver Creek (BLM 2012a, Appendix E). As such, fish habitat within Beaver Creek and its tributaries in the White Mountains NRA have been managed to maintain and/or enhance fish populations with an emphasis on Arctic grayling (BLM 1986). Similarly, a major goal for the NRA is to protect and maintain the water quality of Beaver Creek to meet state water quality standards and promote a quality fishing experience (BLM 1986b). Mechanized placer mining within the floodplain and/or stream channels of Beaver Creek's principal tributaries would not maintain or enhance fish habitat and populations or water quality. The White Mountains NRA Record of Decision and Resource Management Plan (BLM 1986b) states that "Extensive placer mining on Beaver Creek or its principal tributaries would be in conflict with recreational purposes because of degradation to natural and primitive values of the Beaver Creek WSR corridor and damage to Arctic grayling habitat". It also states that sport fishing on Beaver Creek contributes to public enjoyment of the NRA and fish habitat in tributary streams should be protected because they contribute to fish populations in Beaver Creek.

Beaver Creek Chinook salmon are currently a BLM Watch List species (BLM 2010). This species should be emphasized for additional inventory, monitoring, or research efforts to better understand the population or habitat trends. Beaver Creek Chinook salmon are a component of the Yukon River Chinook stock, a *stock of yield concern* since 2000 (Howard et al. 2009). Beaver Creek Chinook salmon spawn and rear immediately downstream and potentially within the area proposed for opening to conventional mining (Figure M.1). The adverse impacts from mechanized mining, including the downstream effects and habitat degradation, could cause the Beaver Creek Chinook to become designated as a BLM Alaska Sensitive Species.

Cumulative Effects

Cumulative impacts to fish and aquatic resources consist of past, present, and reasonably foreseeable future impacts, including impacts on non BLM-managed lands. Hardrock mineral leasing in Alternative D would add to cumulative impacts from exploration and development of locatable and leasable minerals elsewhere in planning area, including on state and private lands.

Fish and aquatic resources have been adversely impacted from past mechanized mining activity in the Beaver Creek drainage. The majority of these impacts occurred from 1900 until the mid-1980s in Nome Creek, where extensive mining for placer gold obliterated seven miles of stream and floodplain (Kostorhys 2007). This activity resulted in the direct loss of fish habitat and sediment pollution to Beaver Creek. Although habitat conditions in Nome Creek have greatly improved from nearly 20 years of reclamation work by the BLM, desired conditions for aquatic habitat have not yet been achieved (desired future conditions are described in section 2.4.1.3 of the Draft RMP/EIS, BLM 2012a). Portions of Nome Creek have not been reclaimed and are not likely to be in desired condition for aquatic habitats. Mechanized mining activities have also occurred in other tributaries, but to a much lesser extent. There are no known current mining activities in the Beaver Creek drainage.

A hardrock mineral leasing program would open 160,000 acres to the leasing and exploration of formally locatable minerals in the White Mountains NRA with an anticipated disturbance of 661 acres and eight miles of stream. Suction dredging activities may impact 14 miles of stream. Past and future mechanized mining proposed in this alternative may result in approximately 20 miles of stream within the NRA that would not meet the desired conditions for aquatic habitats. Cumulative impacts specific to the NRA would be in addition to the cumulative impacts described in section 4.3.1.4.2. of the Eastern Interior Draft RMP/EIS (BLM 2012a). Cumulative impacts from Alternative D, would have the greatest potential for adverse impacts to fish and aquatic resources relative to the other alternatives.

M.3.2.3. Non-Native Invasive Species

Alternative D also allows the most latitude to OHV use and rights-of-way and would result in the greatest disturbance to soil and vegetation in the areas recommended open to hardrock mineral leasing. This would create the greatest potential for the introduction of nonnative invasive plant species (invasive plants) within the White Mountains NRA. Equipment imported for mineral exploration and development activities often harbor seeds of invasive species that could dislodge and germinate at these remote sites.

The reasonable foreseeable development scenario (RFD) forms the basis for evaluating the impacts to resources (section M.3.1) from hardrock mineral leasing. The total disturbance over the life of the plan is expected to be 661 acres from all hardrock leasing and exploration licenses, a relatively small portion of the 160,000 acres open to exploration and development. Assuming that exploration and development occurs throughout the open area, invasive plant species could be introduced in a dispersed rather than concentrated pattern, complicating control and containment.

The RFD includes the assumption that 20 miles of roads would be built in support of new placer developments. The roads are linear vectors for the introduction and spread of invasive plants into these remote areas. Seeds from infestations along roads can move along other intersecting linear features, such as trails and waterways, further spreading undesirable nonnative species into remote areas. For example, infestations of white sweetclover (*Meliotus officianalis*) have been documented on sand bars along the Nenana River, spreading from source populations upstream (Conn et al. 2008). Section 4.7.1.3.4 of the Eastern Interior Draft RMP/EIS (BLM 2012a), which is incorporated by reference, contains analysis of rights-of way development in the White Mountains NRA for Alternative C. Impacts identified in this section apply to the roads in support of new placer developments analyzed in this supplement.

Any natural or human-caused disturbance to the landscape provides an opportunity for invasive plants to become established. Equipment, watercraft, vehicles, and gear may harbor seeds that may then be transported to project sites. Climate change may accelerate the ability for invasive plants to become established (Rupp and Springsteen 2009). More general information about vectors and impacts from introduction and spread of nonnative invasive plants are in Chapter 4 of the Eastern Interior Draft RMP/EIS (BLM 2012a). This information is incorporated by reference. Section 4.3.1.5 discusses effects common to all subunits. Section 4.7.1.3 of the Draft RMP/EIS contains analysis of impacts for locatable minerals on 4,000 acres of valid existing rights outside the NRA and other decisions, but assumes no hardrock leasing within the White Mountains NRA. Impacts from hardrock mineral leasing would be similar to those from locatable mineral exploration and development.

ROPs and Leasing Stipulations in Appendix A of the draft RMP/EIS and those modified in this supplement (shown in Appendix A of this document) to mitigate impacts from hardrock mineral leasing would be applied on a case-by-case basis to leases and exploration licenses. ROPs in section M.4.2.10 of this document specifically address eliminating or minimizing the introduction and spread of invasive plants by prescribing standards for vegetation treatment, revegetation with native plants, reclamation for roads and trails, and salvage of vegetative mat and topsoil. Other ROPs in Appendix A would also help limit the introduction and spread of invasive plants.

Nonnative invasive species other than plants may be introduced by exploration or development when equipment from Canada or other parts of the United States are imported to the work sites. This equipment can harbor insect eggs, larvae, pupae, adult or other viable life cycle stages and other undesirable pathogens and pests. Little documentation exists that invasive species other than plants have been introduced into Interior Alaska. Over the life of the plan where there may be concerns about other invasive species, however, permit stipulations to mitigate introduction of insects, other pests and pathogens would be developed on a case-by-case basis.

Indirect impacts would result where invasive plants become established due to hardrock exploration development, including potentially long-term changes in plant community structure and diversity and wildlife habitat degradation. Costs include long-term monitoring and control. Containment and control of invasive plants for the long-term may also include further soil disturbance and the application of herbicides.

Cumulative Effects

Cumulative effects of past, present and reasonably foreseeable actions that are common to all for nonnative invasive species have been developed in section 4.3.1.5.2 of the Eastern Interior Draft RMP/EIS (BLM 2012a). Cumulative effects specific to the White Mountains Subunit for nonnative invasive species are in section 4.7.1.3.6. The combination of the removal of vegetation for exploration and development, increased disturbance of riparian vegetation and bank stability from multiple stream crossings, user-created trails, new support roads in the southeast portion of the White Mountains NRA, and present and potential future actions on adjacent federal, state and private lands increases the footprint for invasive plants to become established and spread from adjacent development into the relatively weed-free NRA. Ongoing climate change is expected to result in an increase in the number of nonnative species that can become established in subarctic areas due to longer frost-free season and thawing of permafrost. Changes in precipitation projected for the Eastern Interior may also benefit invasion by invasive plants that outcompete native plants and alter wildlife habitat.

M.3.2.4. Soil and Water Resources

Compared to other alternatives, Alternative D would result in the greatest disturbance to soil resources and adverse impacts to water quality because selected areas (Figure M.1) would be open to hardrock mineral leasing. Ongoing climate change would also affect these resources and may increase the magnitude of effects from mining.

Anticipated disturbance in the White Mountains NRA is estimated at 507 acres by mechanized placer mining operations, 20 acres associated with the issuance of placer exploration licenses, 50 acres from the issuance of rare earth element exploration licenses, and 84 acres of disturbance from placer gold suction dredging in areas with high placer gold potential, including Ophir, Bear, Quartz, Champion, Little Champion and Moose creeks. Mining activities would be limited to approximately 160,000 acres in areas of known historic mineral activity in the south/southeast part of the White Mountains NRA. Lands within one-half mile of Nome Creek would be closed to leasing because of long-term ongoing stream reclamation as well as parcels of wetland acreage committed in perpetuity as U.S. Army Corps of Engineers compensatory wetland mitigation acreage.

Disturbance to soil and water resources by any particular mining or exploration operation would need to be assessed on a case-by-case basis. Impacts to soil and water resources vary depending on the development methods used, size of the operation, and number of mines. Because 160,000 acres would be open to mineral development under Alternative D there would be increased potential for adverse impacts to soil and water resources. Impacts would be reduced through application of ROPs and site-specific analysis of subsequent authorizations.

Effects from Mechanized Placer

Probable impacts to soil and water resources from placer mining were described in detail in the Beaver Creek Placer Mining Final Cumulative EIS (BLM 1988b). Impacts can vary considerably depending on factors including site characteristics, size of the disturbed area, and mining methods. Where placer mining operations utilize heavy equipment, the following impacts could be expected.

Placer mining can have an adverse effect on the existing soil profile structure by stripping of overburden and riparian/wetland vegetation. The usual procedure is for the overburden (including organic materials) to be stripped, coarse underlying materials separated from gold-bearing material in the processing plant, and fine materials discharged to a series of settling ponds with recycled water used by the processing plant. There is an irretrievable loss of any soil that enters waterways and is transported downstream.

Erosion of soils from non-point sources typically contribute to the sediment load of stream systems and may result from stream crossings, roadways directly adjacent to stream channels, improved roads and trails which converge down-gradient to stream channels.

The primary impact to water quality from mining is an increase in sedimentation and turbidity. Some direct effects on water quality can be anticipated during the development stage of an operation due to the construction of settling ponds and stream bypasses, and through re-channelization of the stream. This would result in short-term increases in sediment levels and turbidity while equipment operates near or in the active stream channel.

Leasees would be required to meet Alaska Department of Environmental Conservation water quality standards and acceptable discharge standards available online at http:\\dec.alaska.gov/commish/regulations/index.htm. It is anticipated that turbidity as a result of direct and indirect discharge from placer mine operations would meet ADEC water quality standards. However, it is likely that occasional high water or failure of water control structures would introduce sediments collected by the water treatment system into the stream channel. This would result in short-term increases in turbidity and sediment load levels and possible localized sedimentation of the stream substrate. The degree of impact would depend on the amount of material released and the streamflow at the time of release.

Stream channel morphology would be directly affected in all areas where activities associated with mining occur in the active channel; by-pass channels are usually constructed to allow mining in the active channel.

Indirect impacts to water quality would occur through non-point source erosion from disturbed areas associated with placer operations including access road and trails and equipment staging areas directly adjacent to stream channels. Channel readjustment would occur where the active channel was modified. These processes increase suspended sediment into the stream system, particularly during spring break-up and floods.

The impacts to soil and water resources could be expected to decrease after cessation of mining, successful revegetation of the disturbed areas, and stabilization of the disturbed channel. It is estimated that reestablishing vegetation on placer waste rock piles may take decades. The rate of succession (revegetation) seems to be heavily influenced by the proportions of particles of silt and clay size in the surface layer of the tailings (Rutherford and Meyer 1981).

ROPs (Appendix A) have been developed to reduce impacts to soil and water resources that may result from hardrock mineral leasing activities. Additional mitigation measures, if necessary, could be developed during NEPA analysis of specific mineral leases or exploration licenses. Water quality monitoring requirements (Wagner et al. 2006) would be defined through this process.

Daily stream flow and water quality is currently monitored on lower Nome Creek and on Beaver Creek near its confluence with Victoria Creek to document daily, annual, and long-term variation in flows and water quality. The BLM would continue to monitor water quality and in-stream flow in selected streams and lakes to ensure that state water quality standards were met and to document changes in stream flow. Activities expected to adversely alter natural flows would not be permitted.

Effects from Suction Dredging

Suction dredge mining activities have the potential to affect soil and water resources, particularly if operations require access over steep terrain or permafrost soils where surface disturbance may result in increased erosion. Adverse impacts could result from equipment transport and storage, fuel spills, unauthorized expansion of existing trail networks, as well as from compaction of soils at long-term camping sites associated with suction dredge mining operations.

In Interior Alaska a majority of the suction dredge operations occur in the Fortymile River area. The USGS conducted a systematic water quality study of the Fortymile River and many of its major tributaries in June of 1997 and 1998 (Wanty et al. 1999). Surface-water samples were collected for chemical analyses to establish regional baseline geochemistry values and to evaluate the possible environmental effects of suction-dredge placer gold mining and bulldozer-operated placer gold mining (commonly referred to as cat-mining). They concluded, based on water-quality chemistry and turbidity data, that the suction dredges had no apparent impact on the Fortymile River system, although possible effects on biota were not evaluated. One of the three cat-mining operations monitored, however, had adverse impacts on local water quality and streambed morphology.

Cumulative Effects

Cumulative impacts to soil and water resources consist of past and current impacts in addition to reasonably foreseeable future impacts, regardless of whether these impacts were from private, state, or federal actions. Any proposed resource development involving surface disturbance has the potential to cumulatively impact soil and water resources. Incremental cumulative degradation of soils and water resources within a watershed can occur, for example, through mining operations on selected stream segments. For each individual mining operation a small direct loss of soil and some small degradation of water quality are likely. As the number of mining operations increase in a given watershed the cumulative soil loss and cumulative impact to water quality can have long-term adverse impacts on soil stability, riparian habitat, fisheries habitat and water quality.

Cumulative impacts can also result from repetitive use of an area, such as a single OHV stream crossing along a user-created trail. Minor disturbance may result from a single crossing, however, multiple use of an unimproved OHV stream crossing site can result in substantial cumulative impacts including soil compaction, damage to riparian vegetation, erosion along user-created trails and potential decrease in bank stability and local water quality.

Placer mine development has occurred in the Steese-White Mountains area since the early 1800s using a variety of mechanized methods including dredges, draglines, dozers, and excavators. The soil profile is typically destroyed for long periods in areas of active dredging or sluicing, with shorter-term impacts of soil compaction and alteration in areas of facilities, roads, and trails. Water quality is often degraded by increased siltation depending on site characteristic and the type of mining operation.

The total disturbed area from historic placer activity on BLM-managed lands in the planning area is estimated at 7,500 acres, with less than 500 acres likely disturbed by past mining activity in the White Mountains. Alternative D of the Draft RMP/EIS would recommend opening selected areas to mining, potentially resulting in development of new access roads and mine operations. A portion of this projected mining, however, would likely occur in previously mined areas. Development of an estimated 61 small-scale (20 to 30 acres) placer mines and eight large-scale (60 to 80 acres) would be expected on BLM-managed land under Alternative D, all outside of the White Mountains NRA. The addition of a hardrock mineral leasing program in the White Mountains NRA would potentially add two large-scale placer mines, 11 small-scale placer mines, and 11 suction dredging operations in the White Mountains. This level of activity is projected to add an additional 661 acres of new disturbance in the NRA.

In its 2007 Mineral Industry Report, the Alaska Division of Geologic and Geophysical Surveys (DGGS), lists 81 separate companies or individuals that were estimated to be producing gold in the planning area (Szumigala et al. 2008). The amount of acreage on state and private land that has been disturbed or reclaimed by mining operations within the planning area is uncertain.

Two large-scale lode mines, Pogo and Fort Knox, are in operation on state lands within the planning area. One potential lode mine, “Money Knob”, is located near the town of Livengood along the western boundary of the White Mountains subunit. If potential lode mines are developed, varied impacts to soil and water resources would be expected depending on the type of mine development and ore processing methods.

M.3.2.5. Special Status Species

Wetland, riparian, and aquatic habitats support most of the BLM Alaska sensitive animal species. Olive-sided flycatcher, blackpoll warbler, rusty blackbird, Alaskan brook lamprey, Alaska endemic mayfly (*Rithrogena ingalik*), a mayfly (*Acentrella feropagus*), and a stonefly (Alaska sallfly, *Alaskaperla ovibovis*) are BLM Alaska sensitive species that are dependent on these habitats and may occur in the hardrock leasing area, or downstream in areas potentially affected by hardrock leasing activities. The Alaska tiny shrew (*Sorex yukonicus*) may also occur more frequently in riparian habitats. Placer mining and associated changes in access could result in substantial localized impacts to riparian and aquatic habitats and species, if the species occurs in or downstream of the area of disturbance. Rangewide impacts are unlikely to be substantial. Reclamation requirements for riparian and aquatic habitats should increase reclamation success and reduce impacts for sensitive species occurring in these habitat types.

Olive-sided flycatcher, blackpoll warbler, and rusty blackbird are found in the White Mountains in low densities. These species are widely distributed in the planning area. All are associated to some extent with riparian or wetland habitats. ROPs that minimize impacts to riparian and wetland habitats through reclamation would reduce impacts over the long-term. Occurrence of these species in other habitats and areas is dispersed enough that anticipated activities are unlikely to impact any of them at a population level.

Alaskan brook lamprey is found in the Chatanika River, near the Elliott Highway bridge close to the Beaver Creek drainage in the White Mountains NRA, but is not known to occur on BLM-managed lands. Alaska endemic mayfly, a mayfly, and Alaska sallfly are not currently known to occur in the Beaver Creek headwaters or the White Mountains NRA, but data on distribution is extremely limited. It is not known how much of these species habitat, if any, is encompassed by the hardrock mineral leasing area, but disturbance of up to 591 acres of riparian habitats within the headwaters of Beaver Creek is not expected to result in impacts at the population level nor cause a trend toward federal listing for any of these species.

The Alaska tiny shrew occurs in low density within a variety of habitats, but is most common in riparian shrub habitats. It has been documented to occur in the Steese National Conservation Area near Twelvemile Summit. Widespread activities that clear large areas of vegetation could negatively impact this species. Mining could have localized effects to shrew habitat, but given the variety of habitats used and the low level of disturbance anticipated, would not likely occur at a scale or degree to cause a trend toward federal listing.

Most BLM Alaska sensitive plant species occur in habitats with specialized conditions, such as: steep south-facing dry bluff habitats; moist alpine herbaceous sites; rocky ridges, slopes, and screes; and, calcarious rocks or soils. Four species are known to occur in the White Mountains: *Douglasia arctica* is known from Mount Schwatka, Victoria Mountain and VABM Fossil (Parker et al. 2003); *Poa porsildii* found in the Lime Peak and VABM Fossil areas; *Ranunculus camissonis* collected in the Lime Peak area; and, *Trisetum sibiricum* collected from below Mount Schwatka and on Lime Peak. Although not documented, there is a potential for BLM Alaska sensitive plant species to occur in the mineral leasing area, particularly on the ridge between Quartz, Bear, and Champion creeks and in the Roy Creek REE deposit. There is less potential for these species to occur in creek bottom habitats where placer mining would occur. Given the habitat preferences for these species, the highest potential for impacts would be from REE mineral exploration activities. Exploration activities would result in minimal surface disturbance and impacts would be localized at drilling or trenching sites. ROPs SS-2 and SS-3 which require site-specific measures, such as avoidance, to protect sensitive plant species populations or individuals would further reduce the potential for direct impacts.

Hardrock leasing would impact individuals of some BLM Alaska sensitive species, the distribution of which are generally not well-known. Hardrock mineral leasing in the White Mountains NRA would result in greater impacts to sensitive species relative to Alternatives A, B, and C, and would add to cumulative impacts described for Alternative D in section 4.3.1.7.2 of the Eastern Interior Draft RMP/EIS (BLM 2012a). It is not anticipated, however, that the hardrock mineral leasing in Alternative D would trend any sensitive species toward federal listing.

M.3.2.6. Vegetation

A direct loss of native vegetation on 661 acres (less than one percent of the area open to mining) is estimated to occur at exploration and leasing operations during the life of the plan. Most of this vegetation would be riparian and wetland habitats. Some of this area would be needed for ongoing operations and would remain unvegetated for several to many years. A portion would be allowed to revegetate beginning within a year or two of disturbance. Times to reestablish vegetative cover would vary widely. Areas which have adequate fine and organic soil materials and viable seed and vegetative plant parts revegetate relatively quickly. Lease stipulations which require vegetation cover to meet pre-determined standards would result in faster revegetation. Riparian areas in which the stream channel was disturbed and a stable stream channel was not established would remain largely unvegetated until the channel stabilizes. Loss of fines and organic material through flooding and shifting channels can delay revegetation for decades.

The roads and trails developed for access to exploration and mine sites would disturb an undetermined area of native vegetation and supporting soils. Heavy, season-long use may result in significant loss of vegetation and degrading of soils in a variety of vegetation types. Vehicles larger than 1,000 pound curb weight and 50 inch width would be allowed in some instances, resulting in relatively greater impacts. Additional disturbance would occur through expansion of this network of roads and trails by recreational users. Much of the hardrock leasing area burned in a wildfire in 2004 and soils and vegetation may be more susceptible to impacts from motorized use.

In addition to changes in vegetation at exploration and mine sites and the network of roads and trails, establishment and spread of non-native invasive plant species could occur, facilitated by motor vehicle use.

M.3.2.7. Visual Resources

Effects from Hardrock Mineral Leasing

Impacts from mineral leasing would be similar to the impacts from mining operations described in section 4.3.1.9 of the Eastern Interior Draft RMP/EIS (BLM 2012a) which is incorporated by reference. Impacts from mining would vary depending on the methods used and size of operation. Surface disturbing activities associated with mining, such as removal of vegetation and stockpiling of materials, would impact line, form, color, and texture of mined areas creating contrast between mined areas and background landforms. These activities may attract the attention of the casual observer. Large-scale placer mining would have the greatest impact to visual resources. Small-scale placer mining would have similar impacts, but at a lesser scale. Suction dredging would have the least impact, but would still impact visual resources due to camps and associated facilities.

Under Alternative D, 843,000 would be closed to hardrock mineral leasing, protecting visual resources in these areas (Figure M.1). Closed areas include the Beaver Creek WSR Corridor, the Research Natural Areas, and approximately 86 percent of the White Mountains NRA. This would protect visual resources by not allowing surface disturbing activities associated with mineral development. The reclaimed areas along Nome Creek would be closed protecting the viewshed from the access road.

Approximately 16 percent of the NRA (160,000 acres) would be recommended open to hardrock mineral leasing. Two large-scale and 11 small-scale placer mine operations are anticipated in this area. Total disturbance from all mechanized placer mining is anticipated to be 507 acres over the life of the plan.

Approximately 11 suction dredge operations are anticipated. Each operation would have a camp with a footprint of one-half acre over the life of the mine for a total maximum disturbance from all operations of 84 acres over the life of the plan. The movement of materials from dredging occurs underwater and thus does not have a noticeable impact to visual resources and is generally redistributed each spring during break-up or high water events. Impacts from the suction dredge camps are anticipated to be less that six acres annually over the life of this plan.

Effects from Exploration Leasing and Licenses

Placer exploration activities would most likely occur within areas of medium development potential (85,000 acres). It is anticipated that four exploration licenses could be issued over the life of the plan occurring on 5,000 acres each for a total of 20,000 acres (24 percent of the medium potential area). Each operation would have a disturbed annual footprint of 2.5 acres each year for two years per license, for a total of 20 acres of disturbance.

Exploration licenses could be issued on up to 11,000 acres in the Roy Creek REE deposit; however, exploration activities would disturb only an estimated 50 acres over the life of the plan.

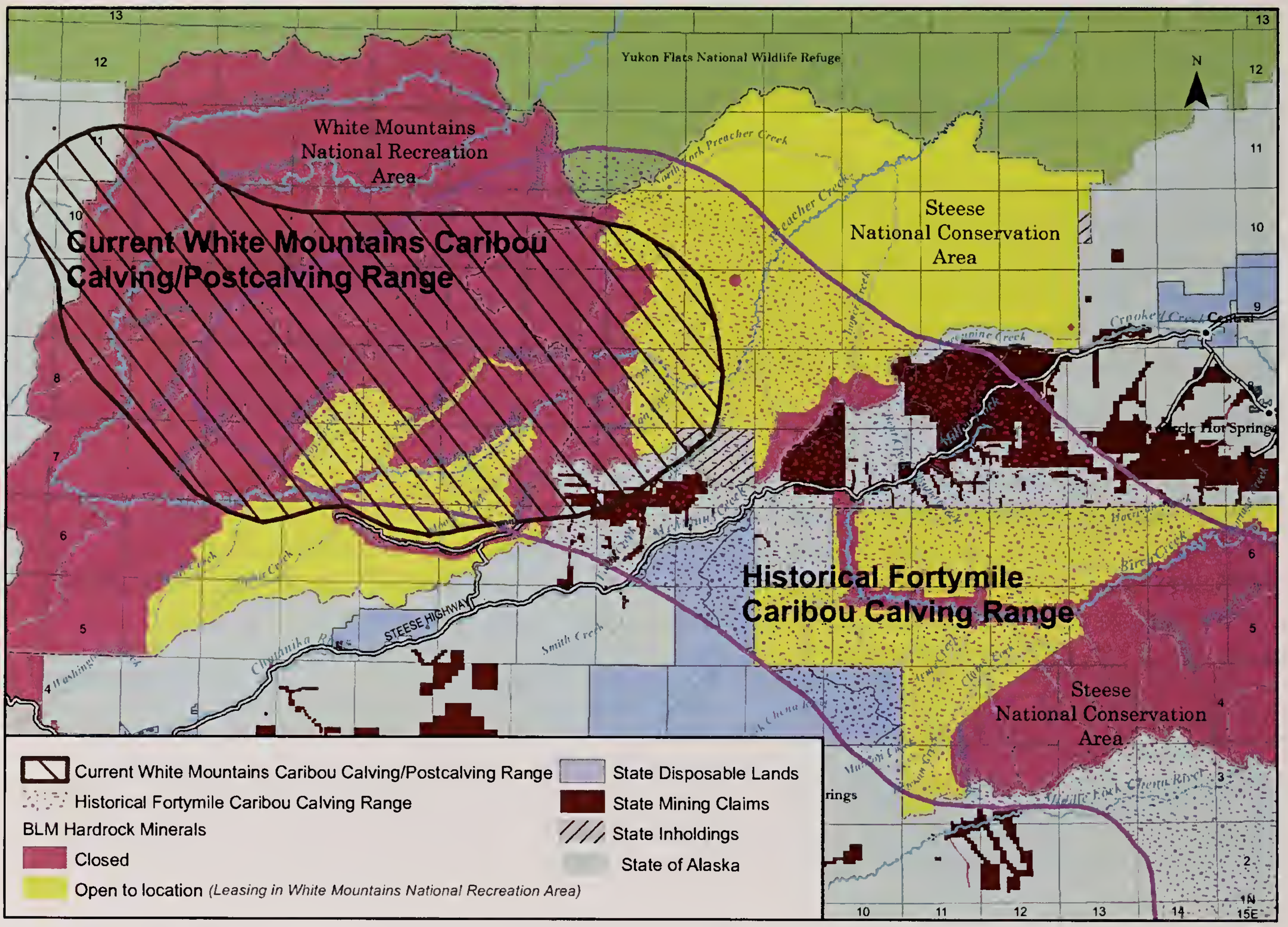
Impacts to visual resources by exploration activities would depend on the scale of the action. Changes to line, form, color and texture of the natural landscape would result from activities such as trenching, access trails, vegetation clearing for drilling activities with the removal of vegetative cover and stockpiled materials creating form contrast between the trenched areas and the stockpiled materials and the background landforms. Trenched material stockpiles would also create color contrast between the greens of vegetation and the browns of soils. Texture would change from a natural medium, subtle texture of vegetation to a course, rough contrast of disrupted soils and organic materials. Changes in line from the irregular, weak line of the natural landscape to a regular, strong line between natural vegetation. Drill structures would introduce straight regular lines into a natural irregular weak line of the natural landscape as well as color contrast between the greens of vegetation and the drill structure for the short time the drill was in place.

M.3.2.8. Wildlife

Affected Environment

The hardrock mineral leasing area contains a high diversity of wildlife habitats ranging from lower-elevation riparian habitats to alpine ridgelines. Most of the hardrock leasing area occurs within the historical calving area of the Fortymile caribou herd and within the current concentrated calving and postcalving area of the White Mountains caribou herd (Figure M.3). The presence of prehistoric archaeological sites immediately south of Nome Creek (Mile 57 of the Steese Highway) used for hunting and caching of caribou during spring migration (Robin Mills pers. comm.) indicates that the area has long been used by large numbers of caribou during calving and migration.

The northern portions of the hardrock leasing area (including the Roy Creek REE deposit and upper Bear Creek and Quartz Creek placer gold areas) have been especially utilized by caribou. These areas occur within the core (most highly used) calving/postcalving area of the White Mountains caribou herd and the area most highly used by the Fortymile caribou herd in the past. The Fortymile herd calved in the White Mountains until 1963, and were reported to “most heavily” utilize the upper portions of Bear, Quartz, and Champion creek drainages (Olson 1957), which are mostly within the hardrock leasing area. The “concentrated calving area” identified by Olson (1957) centered on and included almost all of Bear and Champion creek drainages and headwater portions of Moose and Nome creeks. The location of Fortymile herd calving shifted from year-to-year, but reports indicate that the head of Bear Creek and Quartz Creek were the center of the herd’s long-term calving distribution.


Yukon Flats National Wildlife Refuge
N
White Mountains National Recreation Area
Steese National Conservation Area
Current White Mountains Caribou Calving/Postcalving Range
Historical Fortymile Caribou Calving Range
Steese National Conservation Area
STEESE HIGHWAY
Preacher Creek
Crooked Creek
Central
Circle Hot Springs
Birch Creek
Smith Creek
Chatanika River
Washington Creek
Chena River
Current White Mountains Caribou Calving/Postcalving Range
Historical Fortymile Caribou Calving Range
BLM Hardrock Minerals
Closed
Open to location (Leasing in White Mountains National Recreation Area)
State Disposable Lands
State Mining Claims
State Inholdings
State of Alaska
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This figure displays lands recommended open to hardrock mineral leasing in this Supplement or to location in Alternative D of the Draft RMP/EIS relative to areas historically used by the Fortymile caribou herd as calving habitat and the current White Mountains caribou herd calving/postcalving range. The core of the Fortymile calving range was roughly centered on the heads of Bear and Quartz Creeks from the 1900s through the 1950s before shifting southeast towards the current calving range, centered on southern Yukon-Charley Rivers National Preserve.

Figure M.3. Map of Caribou Habitat

Dall sheep habitat occurs in and adjacent to northern portions of the hardrock mineral leasing area. A Dall sheep mineral lick occurs 0.7 mile from the mineral leasing area in upper Little Champion Creek. The Roy Creek REE deposit is utilized by Dall Sheep during the rutting season. Hobgood and Durtsche (1990) mapped the ridgeline in this area as rutting habitat. The area was not included in a recent delineation of medium-to-high Dall sheep use based on a 2004-2008 study of radio-collared Dall sheep, but that study did document short-term use by one ram during the rut, supporting the earlier designation. The scattered granite tors on the ridge between Quartz, Champion, and Bear creeks are utilized by Dall sheep in all seasons. Although not included in the area to be opened to leasing, this ridge is likely to be utilized for access to leases.

The hardrock mineral leasing area contains relatively high densities of moose, during at least the October through April time period. Rut concentrations in the area were identified by Durtsche et al. (1990). High-quality riparian and aquatic habitats, including salmon spawning and rearing and high densities of Arctic grayling, support aquatic and terrestrial wildlife species. Nutrient transfer from aquatic to upland environments increases productivity of upland habitats. One known peregrine falcon nest site occurs in the hardrock leasing area and a gyrfalcon nest site occurs adjacent to the hardrock leasing area. Redtail hawk nest throughout the leasing area, often near streams.

Environmental Consequences

The effects on wildlife from mining (and exploration) of known deposits of hardrock minerals in the White Mountains Subunit under mineral leases would be similar to those described for locatable mineral development elsewhere in the planning area (BLM 2012a, section 4.3.1.12). Lease procedures (including Leasing Stipulations) allow the BLM to manage development of leases so as to reduce impacts to a greater extent than management under the locatable mineral laws and regulations (43 CFR 3809), but the nature and types of impacts would be similar.

Hardrock mineral leasing in Alternative D would result in an estimated direct disturbance from exploration and mining of 661 acres of terrestrial wildlife habitat. In addition, 20 miles of road is estimated to be built for access. Much of the surface disturbance from mining and access would occur to riparian areas and wetlands habitats which are typically high-value wildlife habitats. Effects of surface disturbance of these habitats would extend, to some extent, downstream into Beaver Creek WSR (e.g., through effects on turbidity or fish migration). Human activities associated with mines would reduce use of riparian habitats by many wildlife species in the immediate vicinity of the activity.

Changes in access and resulting increases in human use of the area may have a greater effect on wildlife and their habitats than direct habitat disturbance from mining-related activities. Most of the leasing area is not accessible via existing trails and much of the existing network of trails (mostly user-created) is susceptible to degradation from increased use. Mining activities would require much heavier use than the current levels of use (much of which is related to hunting) and for longer periods. Vehicles larger than allowed under OHV designations would be permitted in some cases, likely creating proportionally greater disturbance. The linear amount of new access has not been determined, but if each of the estimated 29 suction dredge and placer operations and exploration leases resulted in an average three miles of new trails (or seriously degraded existing trail), about 87 miles of such new or seriously degraded trail might be predicted.

Winter overland moves would often require clearing of vegetation. The linear clearings created may lead to summer use by OHVs and establishment of new OHV trails. The network of mining access trails would be utilized by lessees and recreationists to reach previously inaccessible areas, within which additional new trails may be created, resulting in further expansion of trail networks. Similarly, roads built for mine access would facilitate much greater OHV activity in the area in which they are constructed. In general, motorized access would increase throughout the hardrock leasing area, especially in the high potential areas. In addition to direct changes in habitat from user-created trails, the creation and use may also facilitate the establishment and spread of invasive plants, especially in areas recently burned.

Although little Dall sheep habitat is within the identified hardrock leasing areas, human use of additional access to sheep habitats in the Upper Champion Creek and Quartz Creek area may reduce sheep use of those habitats.

Moose may benefit from some ground disturbances that result in growth of deciduous browse species, such as willow. Increased hunting pressure and harvest in previously remote areas would likely reduce harvest in areas with already-established access, such as Nome Creek. Hunting pressure may result in some displacement of moose from high-density rutting areas.

Most of the estimated 661 acres of habitat disturbance would occur within the historical calving range of the Fortymile caribou herd and current calving area of the White Mountains caribou herd (Figure M.3). The White Mountains caribou herd has a dispersed calving distribution and the hardrock leasing area comprises a small proportion (11 percent) of the current White Mountains caribou herd calving/postcalving area. The much larger Fortymile Herd calves in a dense distribution. More than half of the hardrock leasing area of high development potential occurs within the area of concentrated calving identified by Olson (1957) for the Fortymile herd in 1956. Exploration of the Roy Creek REE deposit is estimated to result in disturbance of 50 acres of current and historic caribou calving habitat. Exploration activities would be required to occur outside of calving/postcalving season in this area, limiting impacts from those activities. The greatest impact to caribou would likely be the change in access, human infrastructure, and the generally increased levels of human activity in the area. Although anticipated placer gold mining operations in the area may have little direct effect on caribou use of the area, the combined direct and indirect effects from changes in access and human use patterns in the area would likely reduce the suitability of the area as calving habitat and potentially reduce the likelihood that the Fortymile Herd would reestablish a habit of calving season use of the White Mountains. The overall level of disturbance, including linear disturbance, and human activity within the calving area would influence the likelihood of use by caribou.

Compared with other large migratory caribou herds, the Fortymile herd's current annual range has a low proportion of range above treeline (17 percent; Boertje et al. in press). Boertje and others (in press) surmised that overgrazing of the herd's current core upland tundra habitat may have resulted in reduced herd nutrition levels and suggested that expansion to additional spring and summer upland tundra in the White Mountains may be of key importance to realizing continued herd growth.

Several species of migratory birds are dependent on (or found in much higher densities in) riparian habitats. Placer mining would remove habitat for these species in localized areas and habitat recovery may require several decades. Regardless of when the vegetation clearing occurs, impacts from the changes in vegetation would persist probably for many years. ROPs (Appendix A) protect only currently nesting birds. Nesting peregrine falcon and gyrfalcon are more likely to be affected indirectly by changes in access than directly by mining activities. Nesting redtail hawk may be displaced by nearby placer mining and dredging activities. These impacts are not expected to result in planning area population level declines of any species of migratory birds.

Cumulative Effects

Hardrock mineral leasing in Alternative D would add to the cumulative impacts from exploration and development of locatable and leasable minerals elsewhere in the planning area, including on state and private lands.

In Alternative D, with this supplement, 26 percent of the current White Mountains caribou calving/postcalving area would be open to leasing of hardrock minerals. A much higher proportion of the Fortymile herd's historical (prior to 1963) would be open to leasing (Figure M.3). Almost the entire 38-mile segment of historical calving and migration habitat between Mount Prindle and Clum's Fork calving area would be open to location or leasing of hardrock minerals (Fig 3.4). The addition of hardrock mineral leasing would further decrease the likelihood that Fortymile caribou would reestablish a tradition of calving in the White Mountains vicinity. Given the relatively small amount of alpine habitat within the range of the Fortymile herd, re-occupation of the calving and postcalving habitats in the White Mountains may be necessary for maintenance and growth of the Fortymile caribou population.

The development of mines and associated access in the hardrock leasing area during the life of the plan would likely make additional mines more economically feasible to develop in later years, possibly including the Roy Creek REE deposit. This could expand the intensity and zone of impacts to wildlife beyond that predicted during the life of this plan, including additional caribou and Dall sheep habitats.

M.3.2.9. Recreation and Travel Management

Affected Environment

Previous placer mining has affected recreation use in both positive and negative ways. Many of the trails now used in the White Mountains NRA were developed as mining access routes and formed the basis the trail development plan in the Recreation Activity Management Plan (BLM 1986). Alaska’s history of mining is of interest to many recreation visitors. Mining has helped to provide some of the recreation opportunities that still exist in the NRA today and provide for a rich cultural context of the landscape and its uses.

In contrast, active mining operations and related infrastructure has the potential to have negative effects for those recreation visitors seeking a more primitive form of recreation experience, particularly in summer, when the effects of mining are more visible. The experience expectation for primitive recreation includes a feeling of solitude and closeness to nature. The 2007 and 2009 Benefits Based Management studies for the White Mountains (Fix 2007, Harrington and Fix 2009) demonstrated that in Nome Creek valley and adjacent areas of the NRA, awareness of the natural world, awareness of minimum impact recreation, and family bonding were rated as important to over 60 percent of the respondents. Highest rated activities in these areas included hiking, walking, hunting big game, berry picking and ATV riding.

The areas currently managed as a Semi-Primitive zone did have historic mining activity prior the 1980 Congressional designation. These areas were targeted for development in the Recreation Activity Management Plan (BLM 1986) to improve and sustain existing access routes and provide for a semi-primitive experience including OHV hunting opportunities, scenic qualities, recreational access to primitive areas and river put-in, wildlife viewing, and hiking opportunities. Since 1986 two campgrounds, a non-motorized hiking trail, a series of motorized summer and winter trails, recreational cabins, and river put-in have been established. These planned infrastructure developments have been entered into BLMs Facility Asset Management system and the BLM receives an annual budget for maintenance and program management.

The White Mountains NRA has quickly developed into an easily accessible recreation destination with a steady increase from 1,200 user days in 1986 to over 12,000 user days in 2011. The bulk of this visitor use increase is in the Semi-Primitive zones.

Very little historic mining occurred in areas currently managed for a primitive recreation experience. Any historic mining in the Primitive zone took place prior to the Congressional designation in 1980. Areas managed for a semi-primitive experience in the NRA have not seen mining activity for 20 years or more.

Environmental Consequences

Direct impacts to recreation include visual impacts, short-term user conflicts, and noise impacts. A formal study was conducted in 1988 for placer mining activity in Beaver Creek. The Beaver Creek Placer Mining EIS (BLM 1988b) found that negative impacts to primitive recreation experiences can result from views of the old claims and disturbance to the landscape in the adjacent recreation management zone. Impacts resultant from active mining is also caused from being able to hear the equipment or see the effects on water quality. These impacts may be mitigated with the ROPs and stipulations analyzed for each action and may be more tolerated over time by the affected user groups.

The anticipated continuous noise production for suction dredging is expected to occur up to four hours per day over a ten hour period in the same location. This continual noise could displace some recreation visitors anticipating a backcountry experience under the current recreation management classification. The RFD suggests that there would be 11 such leases. Lands immediately adjacent to the area recommended open for suction dredge leases are currently managed for primitive recreation setting. There are some large trees adjacent to the creeks in many areas that could dampen the noise levels and shield passersby from the undesirable experience.

The smell of exhaust from a continuously running engine associated with a suction dredge may impact some users by displacing them out of range of the exhaust fumes. Though similar to the exhaust fumes from an ATV, the exhaust smell from a stationary operation would not pass by the recreationalist, but creates a situation where the recreationalist has to displace their intended route to avoid the smell.

Buffers around BLM-maintained facilities (ROPs R-1 and R-2) would be implemented in areas of high and medium development potential (Figure M.1), the terrain is hilly, the trees are small or non-existent and sight distances can be miles long. Views of mining activity would be visible from ridge tops. The visual resource management ROPs would reduce visual impacts.

The Table Top Trail was designed as part of the White Mountains Gateway Project in 1987. It was designed to give non-motorized users a place to go in the midst of an area intensively managed for many uses, including various types of developed facilities including roads, OHV trails, and campgrounds. The trail crosses a ridge top with views to the ridgelines to both the north and south. Mining activity would be visible toward the north. Visual impacts may be mitigated with the ROPs.

Occupancy of mining equipment and related operations may impact as much as 0.2 acres of land for approximately 90 days per operation and impact some recreation users that would be displaced as far as necessary to be out of sight of the camp and out of audio range of the mining operation. This could potentially be miles away. Proper location of camps and staging areas could reduce this impact.

Occasional increases in turbidity levels occurred 30 to 50 miles downstream of active mining in Nome Creek (BLM 1988b, Webb 1982), a primary tributary of Beaver Creek WSR. It is conceivable to assume that new mining activities in Bear, Champion, Little Champion, Ophir, and Trail Creeks could produce similar increases in turbidity especially if mining activity was occurring on more than one creek at the same time, however under the current mining regulations, turbidity levels should be greatly reduced. All of the aforementioned creeks flow into Beaver Creek. Increased turbidity or muddy water, inherent with mining activities, would reduce the aesthetic appeal of Beaver Creek and negatively influence the floating experience by boat floaters

(BLM 1983). The semi primitive recreation management zones are managed for naturalness including clear, free flowing streams with the appearance of being untouched and undisturbed by humans. Beaver Creek supports a popular grayling fishery. Fishing success would decrease in muddy water and displace some users. River hazards are more difficult to identify in muddy waters which increases floating difficulty.

Cumulative Impacts

Indirect and cumulative impacts from the activities and infrastructure associated with mining activities and exploration include the related travel and access to lease locations as well as the increase of recreational users accessing these new access routes. The geographic area of consideration for cumulative effects is the White Mountains NRA.

Access routes to leases could benefit other users if trails were constructed in the proper locations and use sustainable trail construction techniques. Cross-country travel is allowed under alternative D, however, the addition of more concentrated routes with multiple passes over the same area would compact the soil and vegetation and create a permanent scar on the landscape. User-created trails or routes created by four-wheelers are not typically sustainable because they tend to go straight up and straight down hills, which creates a path for water to accelerate and intensify erosion. User-made trails deteriorate over time. They become difficult to travel and negotiate with an OHV. This can develop into a safety hazard. Roads and trails associated with mining operations are attractive to motorized recreation users. While contributing to greater access by the motoring public, it will also greatly expand the proliferation of user-made trails and multiple routes to the same location. The cumulative impact of such actions may result in increased costs for BLM administration of the recreation area and maintenance of new and unsustainable travel routes. These impacts may be mitigated during site-specific NEPA analysis when access routes for each exploration license or lease block is identified, and routed in the most appropriate location.

Mining activity is expected to occur adjacent to Backcountry and Semi-Primitive recreation management zones which are closed to the summer use of OHVs (April 15 through October 30). Mining access routes could attract more ATV users into these border areas where there is currently little to no motorized activity. Access into Bear and Quartz creeks, where suction dredge leasing would occur (and mechanized placer mining in Bear Creek), is generally on north facing slopes typical of black spruce forests and tussock tundra. These areas are underlain with permafrost near the surface and have slopes greater than 20 percent. These environmental conditions can be difficult obstacles for building trails or any kind of sustained access.

The Trail Management Objective (TMO) for managed OHV trails in the White Mountains NRA are for a type 2 semi-primitive motorized trail and describe access as “more difficult” with a tread width of 72 inches maximum and clearance width of 6 to 8 feet. The trails are not developed for access by vehicles other than ATVs and snowmobiles (generally 1,000 pounds or less curb weight and not exceeding 50 inches in width). Any mobilization of mining equipment on these trails would require the trails to be widened. A wider trail corridor could attract use of vehicles larger than allowed by current OHV regulations. Sixty-one miles of these trails are designed for winter use and are not maintained for summer use due to wet and boggy soil conditions. An increase in summer use on these little-used trails will have adverse effects on winter trails. Summer use causes rutting and erosion making winter trail maintenance difficult and reducing the quality of the trails for winter uses. Trail drainage structures currently in place would not accommodate larger vehicles.

The Quartz Creek Trail is a hardened, sustainable trail located in the area of high development potential and would be an attractive access route for mining activity. The trail is currently designed for a three-year maintenance schedule. With the anticipated increase in use, the maintenance schedule may have to be accelerated to every year. To date, there has been a significant investment of public funds into this trail, which would increase with additional maintenance needs.

According to the RFD (BLM 2012b) up to 20 miles of road could be considered for access into Bear and Quartz creeks. Up to 10 miles of road could be considered for access into Ophir Creek. Roads also attract a larger vehicle types not associated with the mining activity that are beyond the scope of the management objectives for travel management in the NRA. Larger vehicles (over 50 inches in width and greater than 1,000 pounds curb weight) would likely leave the road for cross-country travel and create some enforcement issues. Indirect effects from road construction include the reclamation of road beds after the life of the mine or the maintenance and redevelopment of sustainable road infrastructure by the BLM and would require additional expense and maintenance beyond the life of the plan.

Direct effects to recreation are expected to be short-term and could be mitigated through the ROPs or stipulations associated with NEPA analysis of each exploration or leasing action. The access needs and infrastructure associated with the mining activity will increase the proliferation of user-created trail networks in a heavily used area. The proximity to Fairbanks, growing popularity of the area, existing recreation facilities, layered with new user and travel access needs are expected to have a cumulative adverse effect on the administration of the recreation area.

M.3.2.10. Subsistence

Affected Environment

The affected environment is discussed in more detail in Chapter 3 of the Draft RMP/EIS (BLM 2012a) and the fish and wildlife sections of this document.

The areas recommended open to mineral leasing through this supplement are within the current White Mountains caribou herd calving and postcalving area and the historic calving and postcalving range of the Fortymile caribou herd. Caribou are most vulnerable to disturbance during these periods. The area is also important current winter range for White Mountains and Fortymile caribou. The northern portion of the area, which includes the Roy Creek REE deposit and upper Bear and Quartz creeks placer gold, are current and historic high use calving and postcalving areas for both caribou herds. Dall sheep movement corridors and habitat are within and adjacent to the area proposed for hardrock mineral leasing. The area contains relatively high densities of moose during rut and winter seasons (October through April).

Fortymile caribou are among the most important subsistence resources in the planning area. As Yukon River salmon stocks decline, Fortymile caribou become increasingly important to subsistence users in and adjacent to the planning area. Research on land use patterns by rural residents indicates that residents of Birch Creek Village area moved seasonally into the White Mountains to harvest caribou and sheep (Caulfield 1983). Contemporary harvest data indicate little current use of White Mountains caribou and Dall sheep by rural subsistence hunters however use of these populations could increase in importance over the life of the plan and should not be discounted (Subsistence Resources, White Mountains Subunit, Draft RMP/EIS).

Environmental Consequences

Impacts on subsistence resources and uses within areas recommended open to mineral leases and exploration licenses in the White Mountain NRA include user conflicts, displacement of resources, and potential declines in resource availability due to disturbance in critical habitats (spawning) or during critical times (e.g., calving periods). Alternative D, which also allows the most latitude to OHV use and rights-of-way development and identifies the smallest area of protection for wildlife habitat, would have the highest negative impacts on subsistence of all alternatives considered.

ROPs and stipulations developed in the draft RMP/EIS and Supplement (Appendix A) to mitigate the impacts of land use actions on subsistence wildlife resources would be attached as stipulations to the authorizing documents. Minimal direct impacts to subsistence wildlife resources or uses would occur from hardrock mineral leases and exploration licenses because no exploration activities would be allowed in Dall sheep habitat from May 10 through June 1 or in caribou calving and postcalving areas from May 15 through July 15. Exceptions would be allowed when it can be demonstrated that caribou or Dall sheep do not occupy the area (Table M.6, Stipulation 5). Therefore, no direct impacts on abundance of subsistence wildlife resources is expected from this plan decision.

Indirect impacts are expected to be greater and more difficult to mitigate. Increased access to largely remote wildlife habitat is expected to occur as roads to support placer mining are developed and areas cleared of vegetation for winter overland moves become used as summer OHV pioneered trails (section M.3.2.9 Recreation and Travel Management, of this appendix). The resulting increase in non-mining activities may reduce the suitability of the areas for calving and postccalving. Analysis of data on Fortymile caribou habitat condition indicates that current calving and postcalving range has been diminished from overgrazing and limited suitable habitat is available. The research indicates that this area of the White Mountains NRA will become increasingly important to continued growth and stability of the Fortymile caribou herd (Boertje et al. in press). Analysis of indirect impacts to Fortymile caribou from mineral leasing resulted in a finding of may significantly restrict subsistence use of Fortymile caribou (See the ANILCA Section 810 Analysis in Appendix B of this document for further analysis and findings.)

Some conflicts between hardrock-leasing related activity and federal qualified subsistence users may occur from mid-August through September and from November through March if exploration and placer mining is active during these time periods. Access by subsistence hunters may be restricted due to perceived or real barriers to wildlife resources. As a result, hunters may be displaced to other areas. When caribou are in the area during seasons open to hunting they are generally distributed over a wider area, thereby minimizing access issues for subsistence hunting. Moose are available through the greater area and much of the rural resident harvest of moose occurs away from the area open to hardrock mineral leasing, although distribution of moose hunters could change due to increased access into the area. Conflicts among hunters are not expected to be significant.

Ophir Creek, a tributary of Beaver Creek, has been identified as an area with high development potential for placer gold in Alternative D. Spawning areas for Chinook salmon have been identified within Ophir Creek. Because active mining is likely to occur in and adjacent to these spawning areas, direct impacts on this population are expected.

Indirect impacts to subsistence fish species and local water quality from mineral leasing may occur downstream due to turbidity, crossing of streams, high water events and occasional failure of settling ponds (sections M.3.2.4 Soil and Water Resources and M.3.2.2 Fish and Aquatic

Species). These impacts are likely to be short-term. Regulations and ROPs that require recycling of turbid water through settling ponds and reclamation of disturbed stream channels should mitigate most of these impacts.

Cumulative Effects

Cumulative effects may significantly restrict subsistence use of Fortymile caribou due to past, present and reasonably foreseeable actions within the herd's range. The impacts are the same as those described for Alternative D when considered with the cumulative case for the Fortymile and Steese Subunits (BLM 2012a Appendix J).

For subsistence fisheries resources, when analyzed with the cumulative case, impacts may incrementally contribute to the downward trend and resiliency of Yukon River Chinook salmon stocks. Chinook salmon are highly important subsistence species within the Yukon River drainage. The Alaska Board of Fish (Board) classified the Yukon River Chinook salmon stock as a *stock of yield concern* in 2000 (Howard et. al., 2009). Each regulatory cycle the Board reassesses the stocks and Yukon River Chinook salmon have remained a stock of concern as it continues to decline with lower returns each year and harvestable yields not being maintained. Genetic diversity of these small stocks, such as the Ophir Creek population, are extremely important for resiliency of the Yukon drainage stocks and are often overlooked in impact analysis (JTC 2012). Due to declines of the Yukon River Chinook salmon stock and the importance of Chinook salmon to Upper Yukon subsistence villages, analysis of Alternative D with the cumulative case has resulted in a finding of may significantly restrict subsistence use of Chinook salmon within the Upper Yukon River including and downstream from the village of Beaver.

M.3.2.11. Social and Economic

Economic Effects

An economic effect in the White Mountains Subunit continues to result from recreation oriented activities as a result of population growth in the region. Economic effects due to mining on non-federal land and on existing federal claims outside of the White Mountains NRA, but within the subunit, would also continue to be important to the region. There are federal, state, and patented mining claims in the Livengood area with ongoing mineral exploration. Exploration and leasing for placer gold and rare earth mineral exploration would result in positive economic effects from this subunit under Alternative D.

The following discussion is based on gold mining activities likely to occur on land leased for placer or suction dredge mining (Stebbins 2009). Section 4.4.4.1.2 Fortymile Subunit, Effects from Locatable Minerals of the Draft RMP/EIS (BLM 2012a) outlines the Stebbins models for small- and large-scale placer mines, life of mines, and a background discussion of the types of economic impacts and is incorporated by reference.

Economists consider three categories of employment and income in considering the effect of an activity such as mining. These three categories are: direct employment and income, including only employees of mining companies; Indirect employment and income such as employees of businesses providing goods and services to mining companies: and, induced employment and income occurring when jobs are created as a result of spending of direct and indirect income attributable to mining activity. All employment and income shown in this analysis is estimated using input and assumptions from BLM reports (Stebbins 2009, BLM 2009) and McDowell reports (2006 and 2009).

Opening the identified lands in the White Mountains NRA to hardrock mineral leasing under Alternative D is predicted to result in large and small-scale placer mining operations. Small-scale placer mining uses a bulldozer, and excavator and a mobile wash plant to excavate and process gold-bearing gravel. In this model, a two-man crew works 12 hours per day, seven days per week, during a 130-day season. The camp includes one support person and a cook; a total of four workers. Eleven small-scale placer mines are forecast to operate with employment of about four workers each.

Large-scale placer operations utilize excavation equipment larger than the small-scale model. In this model, 2 two-man crews moving material each work a 10-hour shift, seven days per week, during a 130-day season. Five additional employees, including a supervisor, skilled workers, and laborers; a total of nine workers are included in the model. Assuming two large-scale placer mines, the resulting employment is about eighteen workers.

Suction dredging would occur on about 11 new leases. These would employ approximately two workers per operation, for all phases.

In addition, the BLM development scenario indicates approximately four licensed placer exploration efforts. These are included in direct income calculations show in Table M.3.

The total mining employment on BLM-managed lands would be estimated at 84 part-year workers. Data prepared by the State of Alaska uses full-time equivalents. The full-time equivalent in the White Mountain Subunit would be approximately 33 workers, based on the Stebbins (2009) models. Total employment by the Alaska minerals industry in 2008 was 3,392 full-time equivalent jobs (Szumigala et al. 2009). The statistics indicate less than one percent of the industry employment on BLM-managed lands would occur at White Mountain operations. The DGGS reported the average monthly wage for mining in Alaska during 2010 at $8,345. White Mountains gold mining operations account for approximately $3 million in wages, annualized. Jobs data indicates maximum level of effect predicted to occur during the life of the plan. Development scenarios used as the basis for analysis do not contain time lines for development. Mineral exploration licenses or leases may not be issued for years after the plan is completed.

Table M.5. Direct Employment and Income for New Mining

Activity	Crew	Alternative A		Alternative B[a]			Alternative C			Alternative D		
		Current Operations	Current Jobs	New Operations	New Jobs	New Income	New Operations	New Jobs	New Income	New Operations	New Jobs	New Income
Fortymile Subunit												
Suction Dredge	2	6	12	4	8	$278,122	8	16	$566,244	12	24	$834,366
Small Placer	4	27	108	4	16	$578,142	6	24	$867,212	13	52	$1,878,960
Large Placer	9	2	18	1	9	$325,204	1	9	$325,204	1	9	$325,204
Total		**35**	**138**	**9**	**33**	**$1,181,468**	**15**	**49**	**$1,748,660**	**26**	**85**	**$3,038,530**
Steese Subunit												
Suction Dredge	2	1	2	0	0	$0	8	16	$556,224	11	22	$764,836
Small Placer	4	7	28	1	4	$144,535	8	32	$1,156,283	17	68	$2,457,102
Large Placer	9	2	18	0	0	$0	2	18	$650,409	2	18	$650,409
Total		**10**	**48**	**1**	**4**	**$144,535**	**18**	**66**	**$2,362,916**	**30**	**108**	**$3,872,347**
Upper Black River Subunit												
Suction Dredge	2	0	0	0	0	$0	0	0	$0	0	0	$0
Small Placer	2	0	0	0	0	$0	0	0	$0	0	0	$0
Large Placer	9	0	0	0	0	$0	0	0	$0	0	0	$0
Total		**0**	**0**	**0**	**0**	**$0**	**0**	**0**	**$0**	**0**	**0**	**$0**
White Mountains Subunit												
Suction Dredge	2	0	0	0	0	$0	0	0	$0	11	22	$764,836
Small Placer	4	3	12	0	0	$0	0	0	$0	11	44	$1,589,889
Large Placer	9	1	9	0	0	$0	0	0	$0	2	18	$650,409
Total		**4**	**21**	**0**	**0**	**$0**	**0**	**0**	**$0**	**24**	**84**	**$3,005,134**

[a]Sources: Szumigala 2011, BLM 2009, BLM 2012a, Stebbins 2009, McDowell 2006

The BLM plans to open 11,000 acres of known deposits at the headwaters of Roy Creek to mineral leasing and predicts that it will eventually issue competitive leases for deposits of certain rare earth elements under 43 CFR part 3500 on these lands. The lease is offered competitively and a royalty may result. The BLM will charge fair and reasonable rental, determined at the time of licensing or leasing. These rentals are exclusive of royalties.

Exploration activities could include mapping and drilling or trenching in the lease area over a five year period. Income effects would depend upon the size of the initial operation, which may begin with as few as three personnel plus a helicopter crew, all based off site. It is fair to assume the minimum cost of exploration over a 120 day period would average approximately $2,000 to $2,500 per day. This is $240,000 to $300,000 per season in overall cost. The cost is essentially field personnel, helicopter contract, and fuel. Part of this cost would be attributed to the Fairbanks economy. Beyond the initial exploration, expansion of activities may occur, including further drilling and delineation, and eventual mining operation. Additional NEPA analysis will be necessary on a case-by-case basis for the BLM decision to lease for production.

There are no special recreation permits in the area of likely mineral development. No impacts to commercial recreation permits are anticipated (section M.3.2.9). The likely economic effect in an area of little or no commercial recreational activity is zero.

Section M.3.2.10 Subsistence reports: "Contemporary harvest data indicate little current use of White Mountains caribou and Dall sheep by rural subsistence hunters however use of these populations could increase in importance over the life of the plan and should not be discounted (Subsistence Resources, White Mountains Subunit, Draft RMP/EIS)." Given that there is little or no documented subsistence use in the White Mountains NRA, an economic effect is unlikely.

Environmental Justice

Communities most likely to be affected by increased activity in the White Mountains Subunit are (Fairbanks and Livengood) do not qualify as environmental justice populations. Minority or low income populations in the Fairbanks area may benefit from employment in the recreation and mining industries. Under Alternative D, the number of special recreation permits in the planning area would be slightly higher than other alternatives. New mining leases and mineral exploration could result in additional employment accruing to local populations. Minority and low income populations would not be disproportionately impacted.

Possible negative impacts to environmental justice populations and the entire population of the area include loss of employment in another existing industry due to mining development. However, there are no commercial activities in the area potentially opened to mining under Alternative D providing employment that will be affected. All populations may benefit from expanded recreation industry employment as well as mining employment within the White Mountains Subunit. This includes additional land outside of the White Mountains NRA.

Loss of subsistence resources or opportunity may be considered. However, the extent of subsistence use of the specific areas likely to be affected must be demonstrated before there is an attributable and measurable impact. Current data indicate little subsistence activity in these areas. The Fairbanks North Star Borough is also classified as a non-rural community as such, residents of the borough do not quality to fish or hunt under federal subsistence regulations.

M.4. Required Operating Procedures and Hardrock Mineral Leasing Stipulations

M.4.1. Introduction

The BLM has developed measures to protect resources called “Required Operating Procedures” (ROPs) and “Hardrock Mineral Leasing Stipulations” (Leasing Stipulations) as part of the development of the Draft RMP/EIS and Supplement. These measures were guided by the standards and guidelines included in the Alaska Statewide Land Health Standards (Instruction Memorandum AK 2004-023) and by the goals outlined in the RMP/EIS. The ROPs are requirements, procedures, management practices, or design features that the BLM will adopt to protect resources. Leasing Stipulations are requirements to reduce impacts to natural resources from hardrock mineral exploration and development. The ROPs and Leasing Stipulations generally do not restate requirements that already exist in regulations or laws. Regulations or laws may require conditions that are more stringent than those presented in this section.

During development of the Supplement to the Draft RMP/EIS two of the existing ROPs were modified and some new ROPs were added. These changes are highlighted. This appendix does not include the Fluid Mineral Leasing Stipulations. These can be found in Appendix A of the Draft RMP/EIS (BLM 2012a).

M.4.1.1. Required Operating Procedures

Required Operating Procedures apply to all actions, whether implemented by the BLM or authorized by the BLM and implemented by another individual, organization or agency on public land. These were based on the best information available during development of the RMP/EIS.

ROPs are common to all action alternatives and will be applied as appropriate for BLM actions and BLM-authorized activities including: leases and permits; Special Recreation Permits; oil and gas activities; hardrock mineral leasing activities; coal activities; renewable energy activities; mining Plans of Operation; and, authorizations for rights-of-way. For mineral leasing activities, ROPs would apply in addition to the Leasing Stipulations. Only those ROPs concerning resources that are potentially affected by the action will be applied to permits and authorizations. The ROPs may be modified through site-specific analysis of subsequent authorizations. Modifications to ROPs may be appropriate if other measures are taken to protect resources that would result in the same or reduced impact.

The Authorized Officer (AO) or their representative is responsible for ensuring that the intent of the ROPs presented in this RMP/EIS are followed and that permittees comply with the conditions of their authorization. Non-compliance will be documented and a notice will be sent to the permittee, along with corrective actions and a time frame in which the actions are to be completed.

M.4.1.2. Hardrock Mineral Leasing Stipulations

Hardrock Mineral Leasing Stipulations (Leasing Stipulations) are specific to hardrock mineral leasing and exploration in the White Mountains NRA. These Leasing Stipulations are included in a lease. In this Supplement, leasable hardrock minerals include placer gold and rare earth elements. Leasing Stipulations constitute significant restrictions on the conduct of operations under a lease.

Additional site-specific Leasing Stipulations may be added, if determined necessary, through further analysis. Steps during the leasing process where additional NEPA analysis would occur include approval of exploration licenses and associated exploration plans, lease sales, and approval of development plans for approved leases. Additional stipulations may be developed at any of these steps in the process.

Leasing Stipulations may be excepted, modified or waived by the Authorized Officer (AO) pursuant to 43 CFR 3101.1-4 and WO-IM-2008-032. The environmental analysis prepared for hardrock mineral development (such as lease sales or development plans) will address proposals to except, modify, or waive a Leasing Stipulation. To except, modify, or waive a stipulation, the environmental analysis would need to show that: 1) the circumstances or relative resource values in the area had changed following issuance of the lease; or 2) less restrictive requirements could be developed to protect the resource of concern; or 3) operations could be conducted without causing unacceptable impacts; or 4) the resource value of concern does not occur within the lease area. An exception exempts the holder of a lease from the Leasing Stipulation on a one-time basis. A modification changes the language or provisions of a Leasing Stipulation, either temporarily or for the term of the lease. A waiver permanently exempts the Leasing Stipulation.

Compliance with Leasing Stipulations is monitored by the AO or their representative. Non-compliance may result in monetary fines or operation shut-down.

M.4.2. Required Operating Procedures

M.4.2.1. Cultural and Paleontology

ROP C-1 For permitted activities, cultural resource protection and conservation will be consistent with 1) Sections 106, 110, and 101d of the National Historic Preservation Act (1966, as amended); 2) procedures under BLM's 1997 National Programmatic Agreement for Section 106 compliance or its successor agreement; and, 3) the 1998 Protocol for Managing Cultural Resources in Alaska between BLM Alaska and the Alaska State Historic Preservation Officer (SHPO) or its successor agreement.

ROP C-2 Mitigation measures will be considered for all actions that may potentially affect cultural resources. If the AO determines mitigation measures are necessary to protect and conserve known cultural resources, a mitigation plan will be approved by SHPO and implemented by the AO. Mitigation plans will be reviewed as part of Section 106 consultation for National Register of Historic Places eligible or listed properties. The extent and nature of recommended mitigation will be commensurate with the significance of the cultural resource involved and the anticipated extent of the damage. Costs for mitigation will be borne by the land use applicant.

ROP C-3 The BLM will evaluate the impacts of proposed actions to known paleontological resources. If damage to known significant paleontological resources cannot be avoided, the applicant (or the BLM for internal actions) will perform scientific examination of the impacted significant paleontological resources followed by mitigation approved by the AO. This may include the professional collection and analysis of significant specimens by scientists.

M.4.2.2. Fish and Aquatic Species

ROP FA-1 No road crossings will be permitted in priority fish species spawning habitat, unless no feasible alternative exists.

ROP FA-2 New, replacement, and reconstructed stream crossing structures (such as bridges and culverts) will be designed to:

- Accommodate a 100-year flood event, including bedload and debris;
- Maintain fish and aquatic organism passage;
- Maintain channel integrity;
- Accommodate mean bankfull channel widths; and,
- Incorporate adjacent reclamation (such as willow cuttings, wattles, brush layering) on the disturbed areas up and downstream of the abutments.

ROP FA-3 Application of pesticides and other toxicants will occur in a manner that does not prevent or retard attainment of desired conditions or adversely impacts priority aquatic species.

ROP FA-4 Drilling is prohibited in fish-bearing rivers and streams, as determined by the active floodplain; and fish-bearing lakes, except where the applicant can demonstrate on a site-specific basis that impacts would be minimal or it is determined by the AO that there is no feasible or prudent alternative.

ROP FA-5 When feasible, all water intakes will be screened and designed to prevent fish intake.

ROP FA-6 Reclamation plans for the rehabilitation of fish habitat as required under 43 CFR 3809.420(b)(3)(ii)(E) (Performance standards in part 3809 will also be used for hardrock mineral leasing operations in the White Mountains NRA) will focus on three objectives. Typically, these requirements would be satisfied through the development of a site-specific reclamation plan and on achievement of reclamation objectives. Bond release would be based on meeting specific measurable objectives outlined in a monitoring plan (43 CFR 3809.401(b)(3)). These objectives are:

1. Provide a stable channel form that is in balance with the surrounding landform such that channel features are maintained and the stream neither aggrades nor degrades. To achieve this, it will be necessary to design a post-mining stream channel using morphological characteristics of the pre-disturbance channel and floodplain (such as bankfull and floodprone dimensions, meander patterns, design flows and velocities, riffle-to-pool ratios, substrate particle sizes, and so on); which could be derived from field surveys of the area, remotely sensed information, and/or information from adjacent watersheds that exhibit similar characteristics as the watershed proposed for mining.
2. Provide sufficient riparian vegetation or anchored rocks/logs to effectively dissipate stream energy, prevent soil erosion, stabilize streambanks, provide essential nutrient input, and maintain water quality and floodplain function.
3. Provide instream habitat complexity similar to that of pre-disturbance levels through the use of instream structures (such as vortex rock weirs, cross-vane structures, and installation of root wads).

ROP FA-7

Within Riparian Conservation Areas, the Salmon Fork ACEC, and areas open to hardrock mineral leasing in the White Mountains baseline hydrological data adequate to characterize the seasonal flow patterns and discharge will be required prior to surface-disturbing activities with the potential to affect stream channel integrity; reduce riparian functioning condition; or, reduce the Watershed Condition Rating. The BLM will be available to advise operators on the exact type of information and detail needed to meet this requirement. Reclamation plans will be designed to result in rehabilitation of habitats within an accelerated timeframe (such as less than three years) and will focus on active revegetation and streambank stabilization techniques as the basis for reclamation design.

M.4.2.3. Forestry

ROP Forest-1 Timber sale authorizations will require the proper site preparation to ensure natural regeneration of timber stands.

ROP Forest-2 Timber sales will include buffers to prevent disturbance of priority fish species habitat and sedimentation into streams. Buffer widths will be dependent on harvest method, season of harvest, equipment used, slope, vegetation, and soil type. Winter operations will be considered in order to avoid the need for road building and reduce impacts to soils, vegetation, and riparian areas.

M.4.2.4. Hazmat and Waste Management

ROP Hazmat-1 Areas of activities will be left clean of all debris to minimize environmental contamination from solid waste.

ROP Hazmat-2 All solid wastes, including incinerated ash, will be removed by the permittee from public lands and disposed of within an Alaska Department of Environmental Conservation (ADEC) approved facility, unless otherwise specified. Solid waste combustibles may be incinerated in a contained and controlled manner, however, burn restrictions may apply during high-risk wildland fire seasons. Burial of solid waste is not authorized on public lands.

ROP Hazmat-3 Wastewater should be managed in accordance with Title 18 Alaska Administrative Code, Chapter 72, (18 AAC 72) Wastewater disposal. Wastewater can be defined as human wastes (sewage) and gray water (wastewater from a laundry, kitchen, sink, shower, bath or other domestic sources). Pit privies are authorized in accordance with 18 AAC 72.020(b)(c)(i), 72.030 and all applicable updates. If these standards cannot be met, then special authorization may be given by the AO. Gray water may not be released in any waterbody, without authorization under the Alaska Pollutant Discharge Elimination System (APDES). Gray water may be filtered and released to the surface so as not to cause erosion, and the grey water released must maintain compliance with the ADEC's guidance.

ROP Hazmat-4 All hazardous materials and petroleum, oil, and lubricants (POLs) will be stored in containers that are compatible to the material being stored. Containers will be labeled with the responsible party's name, contents of the container, the date the product was purchased, and the date the container was filled.

ROP Hazmat-5 Transportation and storage of POLs will be handled in a safe manner to avoid impacts to the environment and human health. The storage area for any POLs must be approved by the AO.

ROP Hazmat-6 POLs that are transferred to remote locations for operations are to be stored within a containment area constructed to contain 110 percent of the volume of the largest container. The containment area must be lined with an impermeable liner which is free of cracks or gaps, compatible with the contents to be stored, and sufficiently impervious to contain leaks or spills. The containers shall be covered to eliminate the collection of rainwater within the containment area throughout the storage period.

ROP Hazmat-7 All hazardous materials/toxic substances must be disposed of in accordance with EPA and ADEC regulations at the time of disposal.

ROP Hazmat-8 Transfer of POLs to equipment will be completed in a secure manner to minimize the possibility of contamination to the surrounding environment. At a minimum, POL-type absorbent pads will be placed under the transfer location to catch overflow or assist the operator in containing a spill. If refueling cannot be avoided within riparian habitat, 500 feet of fish-bearing waterbodies, or 100 feet of non-fish bearing waterbodies; the responsible party must exercise caution while refueling to ensure no release of POLs into the waterbody. Equipment that has been identified as having a fluid leak must have a drip basin placed under the leak area to ensure no release to the surrounding environment or collection of rain water.

ROP Hazmat-9 Equipment maintenance by the responsible party may be allowed if it is necessary to operate equipment as described in the authorization. Equipment maintenance that has the potential to release fluids should be completed over an impermeable liner to ensure fluid migration to the environment does not occur.

ROP Hazmat-10 A Spill Prevention, Control and Countermeasure Plan will be written for all sites which have the potential to store 1,320 gallons or more of POLs. Spill Prevention, Control and Countermeasure Plans will follow the requirements in 40 CFR 112 and state regulations.

ROP Hazmat-11 All spills will be contained and cleaned up in accordance with ADEC guidance as soon as the release has been identified, unless health and safety of personnel is at risk. ADEC discharge notifications and reporting requirements are outlined in AS 46.03.755 and 18 AAC 75 Article 3. The release of POLs to any waterbody must be immediately reported to ADEC, as soon as the person has knowledge of the release. The responsible party will contact the AO within 48 hours of a spill on public lands. Notifying the EPA may be required for discharges of oil, as required by 40 CFR 112.4.

M.4.2.5. Mineral Materials

ROP MM-1 Use existing upland material sources that meet suitability and economic needs whenever possible. Using material from wetlands, lakes, and active or inactive floodplains will be avoided, unless no feasible upland alternative exists. Sales or permits for in-stream gravel extraction within an active channel will not be allowed in priority fish species spawning habitat.

ROP MM-2 When authorizing mineral material sale sites, avoid habitats critical to local fish or wildlife populations (such as fish spawning and overwintering, calving areas, or raptor nesting sites). Avoid key geomorphic features, such as the river cut banks and associated riparian zones; springs; active channels of small, single channel rivers; and, wetlands.

ROP MM-3 When authorizing mineral material sale sites, avoid priority plant species and communities. If sales are authorized in vegetated areas all overburden, vegetation mats and debris will be saved and appropriately stored for use during site reclamation to facilitate vegetative recovery.

ROP MM-4 When scraping gravel in active or inactive floodplains, maintain buffers that will constrain active channels to their original locations and configurations.

M.4.2.6. Soils

ROP Soils-1 Save all organic material in a separate area from overburden (defined in 43 CFR 23.3 (d)) for future use.

ROP Soils-2 Stockpiled soil and overburden will be spread over mine tailings and stabilized to minimize erosion. The shape of contoured tailing and overburden should approximate the shape of surrounding terrain.

ROP Soils-3 Roadways will be ditched on the uphill side. Culverts or low water crossings will be installed at suitable intervals. Spacing of drainage devices and water bars will be appropriate for the road gradient and soil erodibility of the site.

ROP Soils-4 Design roads and trails for minimal disruption of natural drainage patterns.

ROP Soils-5 Roads and trails should avoid areas with unstable or fragile soils.

ROP Soils-6 Water bars will be placed across reclaimed roads. Spacing will be dependent on road gradient, soil erodibility, and other site-specific factors.

ROP Soils-7 Snow and ice bridges will be removed, breached, or slotted before spring break-up. Ramps and bridges will be substantially free of soil and debris.

ROP Soils-8 Overland moves and heavy equipment use:

- Whenever possible, overland moves that are a part of permitted operations will occur during winter when frost and snow cover is sufficient to minimize vegetation and soil disturbance and compaction. The AO will determine the date when sufficient frost and snow cover exists and no overland moves should occur until these conditions are met.
- Design and locate winter trails and ice roads for overland moves to minimize compaction of soils and breakage, abrasion, compaction, or displacement of vegetation.
- Clearing of drifted snow is generally allowed, to the extent that vegetative ground cover is not disturbed.
- Offsets of winter trail/ice road locations may be required to avoid using the same route or track each subsequent year.
- When access is required in snow-free months, routes that utilize naturally hardened sites will be selected to avoid trail braiding and wetlands will be avoided. The permittee will employ vehicle types and methods that minimize vegetation and soil disturbance, such as use of air or water craft, utilizing existing roads or trails, or use of low ground pressure vehicles.
- The use of heavy machinery in saturated soil conditions will be limited to low ground pressure designated machinery.

M.4.2.7. Recreation

ROP R-1 No mining activity within one-half mile of Crowberry and Richards cabins.

ROP R-2 No mining activity within 200 feet of BLM-managed recreational trails.

ROP R-3 No utilization of public use cabins for purposes of mining activity.

M.4.2.8. Special Status Species

ROP SS-1 The planning area may contain or be identified with Special Status Species or their habitats. The BLM may require actions to avoid or minimize impacts to Special Status Species, pursuant to BLM policy and Endangered Species Act consultation.

ROP SS-2 Where practical, use may be redirected to protect Special Status Species habitat; to enhance indigenous animal population; or, to otherwise maintain public land health through avoidance of sensitive habitat. If impacts to Special Status Species (populations and habitats) cannot be avoided, the applicant (or the BLM for internal actions) will develop mitigation measures to reduce impacts.

ROP SS-3 Where populations or individual sensitive status plant species are located, take measures to protect these populations or individuals through site-specific buffers or management prescriptions. Route new roads and trails away from known sensitive plant communities, with minimum 100-foot buffers; and minimize summer cross-country OHV travel where there are sensitive plants.

M.4.2.9. Subsistence

ROP Sub-1 For externally generated actions, the BLM may require applicants to provide information to potentially affected subsistence communities regarding the timing, siting, and scope of a proposed activity; and to consult with the potentially affected subsistence communities about ways to minimize impacts to subsistence. If these consultations occur, the applicant may be required to provide documentation of their consultation efforts to the BLM.

M.4.2.10. Vegetation and Non-Native Invasive Species

ROP Veg-1 All vegetation treatments and revegetation of surface disturbance will require an approved site-specific plan designed to prevent the introduction of non-native invasive plants (invasive plants), and achieve desired conditions. These plans should describe current vegetative conditions: including plant community composition, structure, cover, seral stages, soil descriptions, age class distribution if applicable, and presence of invasive plants, desired vegetative conditions (based on the ecological capability of the site), treatment methods, measures for preventing introduction and spread of invasive plants, and monitoring actions. Whenever possible, treatments will use native vegetation and seed. Non-native vegetation and seed may be used with specific approval from the AO, and in the following cases (1) where native species are not available in sufficient quantities; (2) where native species are incapable of maintaining or achieving the objectives; or, (3) where non-native species are essential to the functional integrity of the site. Seed must meet Alaska certification standards (11 AAC 34.020 Prohibited and Restricted Noxious Weeds) and any amendments to the existing seed laws or new seed legislation.

ROP Veg-2 Existing roads and trails will be utilized for access where feasible, rather than creating new roads and trails. All road or trail construction must include a plan for reclamation similar to a vegetation treatment plan in ROP Veg-1 above. It should also include best management practices for revegetation of cuts and fills and minimize off-site sediment transport impacts. Construction of road or trails in wetlands and floodplains will be avoided.

ROP Veg-3 Destruction of the vegetative mat and associated vegetation will not be be authorized, unless the AO determines that no feasible alternative exists. In those cases the AO will require that the vegetative mat and topsoils be salvaged and appropriately stored and used for reclamation. If the AO decides that vegetative mat and topsoils cannot be salvaged, other measures to protect vegetation and soils will be considered. Plans for revegetation of surface disturbances will be clearly addressed during authorization of an action.

ROP Veg-4 Design and locate permanent facilities to minimize the development footprint.

ROP NIS-1 To eliminate, minimize, or limit the spread of noxious and non-native invasive plants, only feed and mulch (hay cubes, hay pellets, or straw, for example) certified as weed-free through the Alaska Weed-Free Forage certification program (or other programs with approval of the AO) will be authorized on BLM lands. Where Alaska certified sources are not available, locally produced forage and mulch may be used with approval from the AO. If no certified weed-free or local sources are available, other products may be used with the approval of the AO.

ROP NIS-2 To eliminate, minimize, or limit the spread of noxious and non-native invasive plants, only gravel and material certified as weed-free through the Alaska Weed-Free Gravel certification program will be authorized on BLM lands. Where weed-free gravel and materials are not available other sources may be used, with the approval of the AO.

ROP NIS-3 Fire management actions, including prescribed fire operations, wildland fire suppression and fire rehabilitation efforts, will protect burned and adjacent areas from the introduction and spread of non-native invasive plants. Protection may include the use of washing stations with a containment system.

ROP NIS-4 Employ measures outlined in the most current Alaska Aquatic Nuisance Species Management Plan (ADF&G 2002a) and the most current Interim Fire Operations Guidance to Prevent Spread of Aquatic Invasive Species (USFS 2011) to reduce the introduction and spread of Aquatic Nuisance Species.

ROP NIS-5 All actions implemented or authorized by the BLM will include measures to prevent the introduction and spread of non-native invasive species, if applicable to the site.

M.4.2.11. Visual Resource Management

ROP VRM-1 To the extent practicable, all facilities and activities will be located away from roads (except access roads), rivers, trails, and other transportation features; using distance to reduce the facility's visual impact along travel corridors.

ROP VRM-2 All facilities and activities will be designed to meet the visual resource management class, using proper siting and location so that natural features of vegetation and landforms provide screening from travel corridors and other key observation points, and to blend with the natural surroundings.

ROP VRM-3 The modification or disturbance of landforms and vegetative cover will be minimized. Facilities and activities will be designed to reduce unnecessary disturbance.

ROP VRM-4 Facilities and activities will be designed so their shapes, sizes, colors, and textures harmonize with the scale and character by repeating the elements of line, form, color and texture of the surrounding landscape, where possible.

ROP VRM-5 In open exposed landscapes, development will be located in the opposite direction from the primary scenic views, where feasible.

M.4.2.12. Water, Riparian, and Wetlands

ROP Water-1 Where instream operations are authorized, streams must be diverted using an appropriately sized bypass channel.

ROP Water-2 In mining operations and fluid mineral leasing operations, all process water and ground water seeping into an operating area must be treated appropriately (i.e., use of settling ponds) prior to re-entering the natural water system.

ROP Water-3 Settling ponds will be cleaned out and maintained at appropriate intervals to comply with state and federal water quality standards. Fine sediment captured in the settling ponds will be protected from washout and left in a stable condition at the end of each field season to prevent unnecessary or undue degradation to the environment during periods of non-operation.

ROP Water-4 Streams altered by channeling, diversion, or damming will be restored to a condition that will allow for proper functioning of the riparian zone and stream channels. Active streams will be returned to the natural water course or a new channel will be created at its lowest energy state (valley bottom) that approximates the old natural channel in shape, gradient, and meander frequency using a stable channel design.

ROP Water-5 All permitted operations will be conducted in such a manner to not block any stream or drainage system.

ROP Water-6 Structural and vegetative treatments in riparian and wetland areas will be compatible with the capability of the site, including the system's hydrologic regime, and will contribute to maintenance or restoration of proper functioning condition.

ROP Water-7 Projects requiring the withdrawal of water will be designed to maintain sufficient quantities of surface water and contributing groundwater to support fish, wildlife, and other beneficial uses.

ROP Water-8 State-designated stream crossings will be used where possible for vehicle travel. Stream crossings are online at http://www.habitat.adfg.alaska.gov/gpvehstreamxings.php, noted under the General Permits Index-Authorized Vehicle Stream Crossings

ROP Water-9 Rivers and streams will be crossed by vehicles at shallow riffles from point bar to point bar, where possible.

ROP Water-10 When a stream must be crossed, the crossing will be as close to possible to a ninety degree angle to the stream. Stream crossings will be made at stable sections in the stream channel, based on Rosgen channel type evaluations.

ROP Water-11 Disturbed stream banks will be recontoured and revegetated (or other protective measures will be taken) to prevent soil erosion into adjacent waters.

M.4.2.13. Wildland Fire Management

ROP FM-1 Permittees and casual users will be held financially responsible for any actions or activity that results in a wildland fire. Costs associated with wildland fires include (but are not limited to) damage to natural or cultural resources and costs associated with any suppression action taken on the fire.

ROP FM-2 The BLM will not be held responsible for protection of permittees' structures or their personal property from wildland fire. It is the responsibility of permittees and lessees to mitigate and minimize risk to their personal property and structures from wildland fire, following the conditions in their permit.

ROP FM-3 Gas-powered equipment must be equipped with manufacturer approved and functional spark arrestors.

ROP FM-4 To avoid the potential impacts to aquatic life, the BLM prohibits the use of fire retardant, except when necessary to protect human life, permanent year-round residences, national historic land-marks, structures listed or eligible for the National Register of Historic Places, government facilities, other designated sites or structures, or high-value resources on adjacent lands. Water will be used instead of fire retardant where possible or appropriate. The use of fire suppressant foams is prohibited. Fisheries staff will be involved with decisions to deliver chemical retardant, additives to, or grey water discharge into surface waters.

ROP FM-5 The use of tracked or off-road vehicles in wildland fire suppression or management activities will be conducted in a manner that does not cause erosion, riparian area damage, water quality or fish habitat degredation, or contributes to stream channel sedimentation.

ROP FM-6 Off-road use of heavy equipment and other motorized vehicles requires approval of the AO.

ROP FM-7 Rehabilitate burned areas in accordance with the wildland fire-specific rehabilitation plan provided by the Field Office to the suppression agency.

ROP FM-8 Firelines to mineral soil will not be built in or around riparian areas; unless they are needed to protect life, property, and/or wetland resources. Use natural features as preferred firebreaks over firelines constructed to mineral soil. When possible, use hand crews to construct firelines within (or adjacent to) riparian areas.

ROP FM-9 To the extent practicable, select the location for incident bases, camps, helibases, and so on to avoid riparian areas.

M.4.2.14. Wildlife

ROP Wild-1 Design pipelines and roads to allow the free movement of wildlife and the safe, unimpeded passage of the public while participating in traditional subsistence activities. The currently accepted design practices are: 1) Above-ground pipelines will be elevated a minimum of seven feet, measured from the ground to the bottom of the pipeline at vertical support members, to facilitate human and wildlife movement under the pipe; 2) In areas where facilities or terrain may funnel caribou movement, ramps over pipelines or buried pipelines may be required; and, 3) Where feasible, maintain a minimum distance of 500 feet between above-ground pipelines and roads.

ROP Wild-2 Prior to development of large facilities, the AO may require development of an ecological land classification map of the development area. The map will integrate geomorphology, surface form, and vegetation at a scale, level of resolution, and level of positional accuracy adequate for detailed analyses of development alternatives and facility siting options. The map will be prepared in time to plan one summer season of ground-based wildlife or vegetation surveys, if deemed necessary by the AO, before approval of exact facility location and facility construction.

ROP Wild-3 Whenever possible, operations that require vegetation removal will avoid the migratory bird nesting period of May 1 to July 15 (USFWS Advisory: Recommended Time Periods for Avoiding Vegetation Clearing in Alaska to Protect Migratory Birds. September 2007). If NEPA analysis reveals that this would unacceptably compromise project objectives or logistical feasibility, potential impacts must be identified, and mitigation applied that are appropriate to the magnitude and duration of expected effects. Assessments would focus on species of concern, priority habitats, and key risk factors. Permittees/project proponents will be reminded that it is their responsibility to comply with provisions of the Migratory Bird Treaty Act.

ROP Wild-4 Employ industry accepted best management practices to prevent raptors and other birds from colliding with or being electrocuted by utility lines, alternative energy structures, towers, and poles (APLIC 2006, http://www.aplic.org/). If possible bury utility lines in important bird areas. Where raptors are likely to nest in human-made structures (such as cell phone towers) and such use could impede operation or maintenance of the structures or jeopardize the safety of the raptors; equip the structures with either (1) devices engineered to discourage raptors from building nests, or (2) nesting platforms that will safely accommodate raptor nests without interfering with structure performance.

ROP Wild-5 Guy-wired apparatus, regardless of purpose, will be marked in accordance with the guidance provided by the USFWS Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers, dated September 14, 2000, or a more current or contemporaneous version of that guidance.

ROP Wild-6 To minimize the potential for disease transmission to wildlife, the use of domestic sheep, goats, alpacas, llamas, and other similar species will not be authorized in conjunction with BLM-authorized activities in Dall sheep habitat.

ROP Wild-7 Activities will not be authorized between May 15 and July 15 if the activity will interfere with caribou calving and postcalving activities or Dall sheep lambing (May 10 through June 1). However, ongoing mineral production activities will be allowed throughout these time periods. In these areas and time periods, aircraft associated with activities that require BLM authorization will maintain an altitude of at least 1,500 feet above ground level (except for takeoffs and landings), unless doing so would endanger human life or violate safe flying practices. These seasonal restrictions can be modified based on actual caribou or Dall sheep occupancy of the area.

ROP Wild-8 Within the Fortymile and White Mountains caribou calving and postcalving ranges (Map 90 of the Draft RMP/EIS), mineral exploration activities will not be authorized from May 15 through July 15 unless the AO determines that caribou no longer occupy the specific area of the proposed operations. This seasonal restriction can be modified based on actual caribou occupancy of area.

ROP Wild-9 All reasonable precautions will be taken to avoid attracting wildlife to food and garbage. Garbage from all BLM-authorized activities will be removed and properly disposed to prevent habituation of wildlife or alteration of populations. The BLM may require food and garbage to be stored in bear-proof containers or by methods that make it unavailable to bears or other wildlife.

ROP Wild-10 From May 1 through August 31, avoid sustained human activity within one-quarter mile of trumpeter swan nests and rearing ponds. No activity will commence prior to May 15 and, if necessary, qualified personnel will conduct a preliminary site survey within the two-week period prior to the projected start date of the activity to determine trumpeter swan presence. If present, short-term activities will be delayed until after nesting trumpeter swans and cygnets have left the habitat. Exceptions may be granted by the AO, following NEPA analysis, if no feasible alternative exists.

ROPs Specific to Areas of Critical Environmental Concern

The following four ROPs apply to the Steese, Fortymile, and White Mountains ACECs and the White Mountains Wildlife Conservation Area. They are not applicable to the Salmon Fork ACEC

ROP Wild-11[1] Applicants proposing to conduct surface-disturbing activities or other intensive activities will, at the determination of the AO, be required to submit an approved plan (Caribou and Dall Sheep Impact Assessment and Mitigation Plan) describing methods to minimize impacts to caribou and Dall sheep and their habitat. This plan must describe the proposed project, the design and mitigation alternatives considered, the amount and quality of habitat to be affected, the mitigation and restoration to be applied, the residual impacts predicted, and the monitoring to be undertaken to confirm mitigation success.

ROP Wild-12[1] Permanent roads will generally not be allowed (although long-term temporary roads may be) and roads will generally not be open to the public. Roads will be of the lowest practical profile. Road use may be restricted during caribou calving, postcalving, or Dall sheep lambing. Road construction will not be permitted if other means of access is practical (such as aircraft or winter ice-road). Facilities within ACECs that require year-round access will be located in forested areas where practical. Permitted aircraft will follow a minimum flight level of 1,500 feet above ground level, except at landing and takeoff and when it would compromise safety. The AO may allow exceptions to these access requirements where impacts to caribou and Dall sheep are adequately minimized and where other resource considerations are of higher priority.

ROP Wild-13[1] To minimize habitat loss, the surface disturbance and the aerial extent of facilities will be minimized. The amount of cumulative vegetation clearing and surface disturbance will be minimized through an integrated review of planned disturbance between all land users.

ROP Wild-14[1] Reclamation and revegetation of disturbed areas will be required to meet performance standards set in site-specific reclamation plans, such as a required plant cover (percent) within a certain number of years before a performance bond is released.

Priority Raptor ROPs

Priority raptor species are peregrine falcon, gyrfalcon, bald eagle, and golden eagle. Nesting seasons are defined as: From April 15 through August 15 for bald eagles, golden eagles, and peregrine falcons; and, from March 15 through July 20 for gyrfalcons. Nesting season dates apply to ROP Wild-16 through ROP Wild-20.

[1] Applicable to the Steese, Fortymile, and White Mountains ACECs and the White Mountains Wildlife Conservation Area.

ROP Wild-15 To minimize the direct loss of priority raptor foraging habitat, all reasonable and practicable efforts will be made to locate permanent facilities as far from priority raptor nests as feasible and to minimize habitat loss to the extent feasible. Of particular concern for avoidance are ponds, lakes, streams, wetlands, and riparian habitats.

ROP Wild-16 To minimize disturbance to nesting priority raptors, aircraft authorized by the BLM are required to maintain an altitude of at least 1,500 feet above ground level when within one-half mile of priority raptor nesting sites during nesting season. This protection is not intended to restrict flights necessary to conduct wildlife surveys satisfying wildlife data collection requirements.

ROP Wild-17 To reduce disturbance to nesting priority raptors, campsites authorized by the BLM, including short- and long-term camps and agency work camps, must be located at least 500 meters from any known priority raptor nest site during the nesting season. Exceptions may be granted by the AO if no feasible alternative exists.

ROP Wild-18 Authorized human activity within 500 meters of priority raptor nest sites will be minimized during the nesting season. The cumulative number of authorized visits (defined as each day in which work is done within 500 meters of a nest site) to any nest site per nesting season, by all authorized users, must be limited to three visits per nest site. Exceptions may be granted by the AO if no other feasible alternative exists.

ROP Wild-19 To reduce disturbance impacts to priority raptors, motorized ground-vehicle use must be minimized within one mile of any known priority raptor nest during the nesting season. Such use is prohibited within one-half mile of nests during the nesting season, unless an exception is granted by the AO.

ROP Wild-20 Construction within one-half mile of known priority raptor nests is prohibited during the nesting season. No facilities that will be used or accessed during the nesting period (including the area of associated human activity by facility users) can be constructed within one-half mile of known priority raptor nesting sites. Exceptions may be granted by the AO if no feasible alternative exists.

ROP Wild-21 Post mining rehabilitation of fish and wildlife habitat will be required. Reclamation and revegetation of disturbed areas will be required to meet performance standards set in site-specific reclamation plans, such as required plant cover (percent) within a certain number of years before a performance bond is released.

M.4.3. Hardrock Mineral Leasing Stipulations

The following leasing stipulations would be applied to hardrock mineral lease sales.

Table M.6. Hardrock Mineral Leasing Stipulations

Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
Goal: Prevent avoidable damage from proposed land uses to habitats supporting Special Status Species animals and plants, and their habitats.		
Stipulation 1: The lease area may contain or be identified with Special Status Species or their habitats. The BLM may require applicants to conduct inventories for Special Status Species and to avoid or minimize impacts to these species pursuant to BLM policy and Endangered Species Act consultation.	Areas open to hardrock mineral leasing	**Exception:** None **Modification:** None **Waiver:** None
Goal: Ensure that goals to protect other resource values in the planning area are met to the extent possible when authorizing hardrock mineral leasing activities.		
Stipulation 2: Upon abandonment or expiration of the lease, all hardrock mineral-related facilities will be removed and sites rehabilitated as near to the original condition as practicable, subject to the review of the AO.	Areas open to hardrock mineral leasing	**Exception:** The AO determines that it is in the best interest of the public to retain some or all facilities. **Modification:** None **Waiver:** None
Goal: Minimize impacts to wildlife species from BLM-authorized activities.		
Stipulation 5: No exploration activities from May 10 through June 1 in Dall sheep habitats and from May 15 through July 15 in caribou calving/postcalving habitat. Construction of production facilities and production activities may occur.	Identified caribou calving/ postcalving and Dall sheep habitats	**Exception:** The AO may grant an exception if the lessee demonstrates that calving caribou or Dall sheep are not currently using the area. **Modification:** Season may be shortened or extended based on actual occupancy of the area. **Waiver:** This stipulation may be waived if caribou migratory patterns change and the areas are no longer used for calving.
Stipulation 6: No exploration or development activities within 500 meters of active priority raptor nests from April 15 through August 15 (only March 15 through July 20 for gyrfalcon nests).	Areas open to hardrock mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative and after consultation with the U.S. Fish and Wildlife Service. **Modification:** Season may be adjusted based on actual nest occupancy. **Waiver:** None
Stipulation 7: No motorized ground-vehicle use or facility construction within a half mile of any known priority raptor nests from April 15 through August 15 (only March 15 through July 20 for gyrfalcon nests).	Areas open to hardrock mineral leasing	**Exception:** The AO may grant an exception if the lessee demonstrates that impacts would be minimal or there is no feasible or prudent alternative. **Modification:** Season may be adjusted based on actual nest occupancy.

Stipulation	Areas where Stipulations Apply	Exception, Modification, Waiver
		Waiver: None

M.5. Section 810 Analysis

M.5.1. ANILCA Section 810 Evaluation and Finding for the Supplement to the Eastern Interior Draft RMP/EIS

This Section 810 evaluation is supplemental to Appendix J sections J.2.4.4 and J.2.4.5 of the Eastern Interior Draft RMP/EIS (BLM 2012a), which analyzed Alternative D decisions on leasing mineral materials (gravel), travel management, and wildlife habitat conservation areas in the White Mountains Subunit. This supplement analyzes the leasing of hardrock minerals within the southeast portion of the White Mountains NRA. The area recommended open to leasing includes headwater tributaries of the Beaver Creek WSR. This supplemental evaluation only addresses Alternative D in the White Mountains Subunit.

M.5.2. White Mountains Alternative D

Alternative D emphasizes active management to facilitate resource development on BLM lands in the subunit. As part of this management direction, leasing of hardrock minerals on approximately 16 percent of the White Mountains NRA would be considered. Travel and trail restrictions would be minimized. A smaller wildlife conservation area focused on protection of Dall sheep and caribou habitat would be identified.

Evaluation of the Effects of Use, Occupancy, or Disposition

Development of mechanized placer mines and suction dredging placer operations would be allowed in areas with high development potential under mineral leases. The projected disturbance as determined through the reasonably foreseeable development (RFD) scenario would be about 591 acres over the life of the plan. Known deposits of rare veearth elements in the headwaters of Roy Creek would be open for exploration, but no development is anticipated during the life of the plan. An estimated 50 acres would be disturbed by exploration for these elements. Exploration of placer resources in areas with medium development potential is anticipated to disturb 20 acres over the life of the plan. The RFD also predicts development of 20 miles of roads in support of exploration and development.

Impacts that may occur include direct disturbance to wildlife on priority habitats, fragmentation of habitat through important movement corridors, and long-term impacts to streams and riparian habitats.

Areas open to hardrock mineral leasing include portions of the current White Mountains caribou core calving and postcalving areas and winter range, historical Fortymile caribou calving and postcalving areas and current winter range, moose habitat, and Dall sheep movement corridors and habitat (see section M.3.2.8 Wildlife). The northern portion of the open area, which includes the Roy Creek REE deposit and upper Bear and Quartz Creeks, are high use current and historic calving and postcalving areas for these two caribou herds.

Caribou are most vulnerable to disturbance during calving and postcalving (Fortymile Caribou Herd Planning Team 2000). However, development and exploration activities will not be authorized between May 15 and July 15 if the activity will interfere with caribou calving and postcalving activities, which will mitigate direct impacts (Appendix A, ROP Wild-7). Additionally, leasing regulations (43 CFR 3500) allow a higher level of protection than locatable mineral laws. Therefore direct impacts from leasing activity are not expected to occur.

The following indirect impacts are expected to be greater and more difficult to mitigate: changes in access to currently remote areas, hardrock leasing related infrastructure (such as roads), and increased levels of human activity. These impacts may reduce the suitability of the area as caribou habitat from pre-calving through postcalving. Changes in access are not limited to projected road development. Areas cleared of vegetation for winter overland moves of large equipment are likely to be used as summer OHV trails. The expanded network of trails may be used by recreationists to reach previously inaccessible areas.

Fortymile caribou are unique among large caribou herds in that they are dependent on a relatively small area of upland tundra for pre-calving through autumn (Boertje et al. 2012). Further, Boertje et al. (2012) expect that the White Mountains will become increasingly important to the Fortymile herd, given evidence that overgrazing has occurred on current core upland tundra habitat. Because of the projected importance of this portion of the historic Fortymile herd calving/postcalving range and the importance of this herd to subsistence hunters across the planning area, indirect impacts from exploration and development in the area may significantly restrict subsistence use by impacting abundance of Fortymile caribou. Additionally, when considered with decisions in the Draft RMP/EIS Alternative D for the Steese and Fortymile subunits and the cumulative case, significant restrictions on customary and traditional (subsistence) use may also occur.

The increased access from roads and pioneered trails in the area may shift the distribution of hunters but is not expected to reduce the availability of caribou for subsistence hunters across the planning area.

Spawning areas for Chinook salmon have been identified in Ophir Creek and rearing areas include Ophir and Nome Creek. Other undocumented spawning areas are likely to occur in other tributaries to Beaver Creek. Ophir Creek has been identified as an area with high development potential for gold and would be open to placer mining development under Alternative D. Impacts to this population of spawning salmon are likely to be direct, indirect and long-term and could contribute to the larger Yukon River drainage decline in Chinook salmon for subsistence use (see section M.3.2.2 Fish and Aquatic Species and Cumulative Impacts Findings of this supplemental analysis).

Evaluation of the Availability of Other Lands

In Alternative D the BLM would manage to optimize resource use and development, with the fewest restraints of all alternatives on commercial activity (leasable minerals and forest products) and the fewest limitations on travel management and recreation activity of the action alternatives. Other federal lands in the subunit are managed under USFWS planning documents and as conservation system units. Other BLM lands in the state are managed by current planning documents that allow a mixture of development and conservation following BLM's multiple-use mission, or are currently being evaluated through the planning process. State of Alaska and Native corporation lands cannot be considered in a BLM plan and BLM-managed lands outside of Alaska are not considered under ANILCA.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate the use of public lands needed for subsistence use and resources include the three action alternatives (Alternatives B, C, and D) that are presented and analyzed in Chapters 2 and 4 of the Eastern Interior RMP/EIS (BLM 2012a). These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Alternative D with the addition of leasing of known mineral deposits as analyzed in this supplement may significantly restrict subsistence use of Fortymile caribou by communities in or near the planning area. Upland habitat quality in the current Fortymile caribou herd calving/postcalving and autumn range has been documented as declining and this upland portion of the former range is increasingly important to continued herd growth and stability. Fortymile caribou, which have not occupied the area since the 1960s, were documented in the eastern White Mountains NRA in 2011, indicating movement to the area may be beginning. Should the amount of hardrock mineral leasing development expand beyond that anticipated in the RFD, this finding may need to be revised to take into account impacts to the White Mountains caribou herd and other subsistence resources and uses that cannot be mitigated.

M.5.3. White Mountains Cumulative Case

The goal of the cumulative analysis is to evaluate the incremental impact of the current action in conjunction with all past, present, and reasonably foreseeable future actions in or near the planning area. The cumulative analysis considers in greatest detail activities that are more certain to happen, and activities that were identified as being of great concern during scoping. Actions considered in the cumulative analysis include, but are not limited to the following (BLM 2012a section 4.2.4 Cumulative Effects):

Development of minerals will occur on state and private lands in the subunit. Effects will be similar to those described for activities on BLM lands, except that the level of activity is expected to be higher due to higher development potential, particularly on state lands.

Military aircraft use is allowed in Military Operation Areas over much of the White Mountains Subunit and is likely to increase. Impacts to wildlife resources important to subsistence could potentially occur. Current practices by the military to avoid exercises during caribou calving and implementing minimum ceilings have reduced but not eliminated impacts to caribou.

Research, monitoring and other land management activities will continue on all lands in the subunit and include access to remote areas by fixed and rotary wing aircraft, snowmobiles and other OHVs. Disturbance from these activities is localized and temporary.

Climate change will benefit some subsistence resources and negatively affect others. Changes in species distribution and vegetation communities in subarctic areas are predicted to occur by 2040. Frequency and severity of natural wildland fire in Interior Alaska are predicted to increase and result in shifts to deciduous and shrub-dominated landscapes, which may benefit moose and some furbearers but not caribou. Predicted increases in water temperatures would alter chemical and biotic conditions to the detriment of subsistence fish diversity and abundance. Increases in soil temperatures would result in drying of lakes and ponds.

The population of Fairbanks and the surrounding area is predicted to increase by about 10 percent from the 2000 census to the 2020 census. Development of a gas line or other projects may boost the population beyond the estimate. Demands for recreation and subsistence resources are predicted to increase between 10 and 15 percent over the next 20 years. With the management emphasis on recreation in the White Mountains Subunit, increased use would be expected in this area.

Conveyance of remaining selected lands to the state and Native corporations is ongoing. Planning area wide, about 1.1 million acres are in selection by Native corporations (ANCSA 1971) and 1.4 million acres are in selection by the State of Alaska. Fish and wildlife management of harvest would be predicated on state regulations. Based on joint state/federal harvest management of White Mountains caribou herd in the subunit, no impacts to subsistence uses would be expected to occur. Impacts to use of fish and other wildlife may occur if state harvest regulations are more restrictive than federal regulations on those lands.

Alternative B would best protect subsistence resources in concert with actions occurring adjacent to BLM-managed lands in the White Mountains Subunit. Alternative C would somewhat increase impacts to subsistence resources and uses collectively with actions by other land managers adjacent to BLM-managed lands. Alternative D would potentially have the greatest impacts on subsistence resources and uses when added to decisions by adjacent land managers. Alternative A would have slightly less impacts from management prescriptions than Alternative D.

Evaluation of the Effects of Use, Occupancy, or Disposition

According to the analysis of fish and aquatic resources and wildlife resources in Chapter 4 of the Eastern Interior Draft RMP/EIS (BLM 2012a) and the Supplement (sections M.3.2.2 and M.3.2.8 of this appendix), the combination of ongoing locatable mineral development occurring on state, federal and private lands in the subunit combined with future uses and development projected for the subunit could result in cumulative impacts on subsistence resources that use the White Mountains Subunit. The privatization of State of Alaska or Native corporation lands could lead to additional development but is not expected to have cumulative impacts within the subunit.

Evaluation of the Availability of Other Lands

The Cumulative Case, as presented in the supplemental planning document, contains information on reasonably foreseeable activities that could have an effect on the management decisions being analyzed as part of the Hardrock Mineral Leasing Supplement. The purpose of the Cumulative Case is to present known ongoing activity by all entities on all lands near or within the planning area, as well as those activities that have been proposed for the future and are likely to occur. The Cumulative Case is not an implementable alternative that specifies land uses and management, and instead is a discussion of impacts that could affect the management decisions contained within Alternatives A through D. As such, no other lands are evaluated under the Cumulative Case.

Evaluation of Other Alternatives

Alternatives that would reduce or eliminate the use of public lands needed for subsistence include the three action alternatives that are presented and analyzed in Chapters 2 and 4 of the

Eastern Interior Draft RMP/EIS (BLM 2012a), as well as Alternative A. These alternatives were created to represent a wide-range of potential activities that could occur on BLM-managed lands, along with management actions that would serve to protect specific resource values following current national guidelines. Additional alternatives considered, but not analyzed in detail, are also discussed in Chapter 2.

Findings

Hardrock mineral leasing will add to the cumulative impacts from exploration and development of locatable and leasable minerals and other uses in the planning area allowed on BLM-managed lands, other federally managed lands, and state and private lands. The cumulative case, as presented in this analysis, may result in significant restrictions on subsistence use of Chinook salmon and Fortymile caribou in, adjacent to, and downstream from the planning area. Chinook salmon are an extremely important subsistence resource. The numbers of Chinook salmon have been declining throughout the Yukon River drainage over the past two decades, which increases the importance of each spawning population in the system. The infusion of genetic diversity from these small stocks, such as the Ophir Creek population, is extremely important for resiliency of the Yukon River Chinook salmon stocks. Additionally, when considered with decisions in the Draft RMP/EIS Alternative D for the Steese and Fortymile subunits and the cumulative case, significant restrictions on subsistence use of Fortymile caribou may also occur.

M.5.4. Notice and Hearings

The ANILCA Sec. 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the public lands which would significantly restrict subsistence uses shall be effected” until the federal agency gives the required notice and holds a hearing in accordance with ANILCA Sec. 810(a)(1) and (2). The BLM will provide notice in the *Federal Register* that it has made positive findings pursuant to ANILCA Sec. 810 that the following alternatives or the cumulative case presented in the Draft RMP/EIS meets the “may significantly restrict” threshold: White Mountains Subunit, Alternative D; White Mountains Subunit, Alternative D in combination with the Cumulative Case. As a result, public hearings will be held in the potentially affected communities. Notice of these hearings will be provided by way of the local media, including the newspaper and the local radio station, with coverage to many villages in Eastern Interior Alaska.

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Acronym List

Acronyms

µg/m3:	micrograms per cubic meter
AAC:	Alaska Administrative Code
ACEC:	Area of Critical Environmental Concern
ADCRA:	Alaska Department of Community and Regional Affairs
ADEC:	Alaska Department of Environmental Conservation
ADF&G:	Alaska Department of Fish and Game
ADLWD:	Alaska Department of Labor and Workforce Development
ADNR:	Alaska Department of Natural Resources
AFB:	Air Force Base
AKEPIC:	Alaska Exotic Plants Information Clearinghouse
ALCAN:	Alaska-Canada Highway
AML:	Abandoned mine land
ANCSA:	Alaska Native Claims Settlement Act
ANILCA:	Alaska National Interest Lands Conservation Act
AO:	Authorized Officer
AS:	Alaska Statute
ATV:	All terrain vehicle
BLM:	Bureau of Land Management
BPIF:	Boreal Partners in Flight
C&T:	Customary and Traditional
CEQ:	Council on Environmental Quality
CFR:	Code of Federal Regulations
CSU:	Conservation System Unit [as defined by ANILCA]
DOI:	U.S. Department of the Interior
EA:	Environmental Assessment
EDRR:	Early Detection and Rapid Response, used in management of non-native invasive species.
EFH:	Essential Fish Habitat

EI:	Eastern Interior
EIS:	Environmental Impact Statement
EO:	Executive Order
EPA:	Environmental Protection Agency
ESA:	Endangered Species Act
FAA:	Federal Aviation Administration
FCH:	Fortymile caribou herd
FLPMA:	Federal Land Policy and Management Act
FRCC:	Fire Regime Condition Class
GSA:	General Services Administration
GVWR:	Gross Vehicle Weight Rating
HUC:	Hydrologic Unit Code
IM:	Instruction Memorandum
LTC:	Long-term camp or Long-term camping
MFP:	Management Framework Plan
mmb:	Million barrels
MOA:	Memoradum of Agreement
NAAQS:	National Ambient Air Quality Standards
NEPA:	National Environmental Policy Act
NIS:	non-native invasive species
NMFS:	National Marine Fisheries Service
NOA:	Notice of Availability
NOAA:	National Oceanic and Atmospheric Administration
NOI:	Notice of Intent
NP:	National Preserve [Yukon-Charley Rivers National Preserve]
NPS:	National Park Service
NRA:	[White Mountains] National Recreation Area
NRCS:	Natural Resources Conservation Service (U.S. Department of Agriculture)
NSO:	No Surface Occupancy

NWR:	National Wildlife Refuge
NWSR:	National Wild and Scenic Rivers System
OHV:	Off-highway Vehicle
ORV:	Off-road Vehicle [old terminology used in chapter 3]
ORV:	Outstandingly remarkable value [pertaining to wild and scenic rivers]
P.L.:	Public Law
PFC:	Proper Functioning Condition
PLO:	Public Land Order
PM2.5:	A measure of fine particles in the air
POL:	Petroleum, oils, and lubricants
R:	Range
R&PP:	Recreation and Public Purposes [Act]
RAC:	Alaska Resource Advisory Council (BLM Alaska)
RAC:	Federal Subsistence Regional Advisory Council (Federal Subsistence Management Program)
RAMP:	Recreation Activity Management Plan
RAWS:	Remote Automated Weather Stations
RCA:	Riparian Conservation Area
RCT:	Rosgen Channel Type [type of stream channel as defined by Rosgen]
RFD:	Reasonable Foreseeable Development
RMP:	Resource Management Plan
RNA:	Research Natural Area
ROD:	Record of Decision
ROP:	Required Operating Procedure
ROW:	Right-of-way
RSC:	Recreation setting character
RY:	Regulatory year
Sec.:	Section
SRMA:	Special Recreation Management Area

SRP:	Special Recreation Permit
T:	Township
T&E:	Threatened and Endangered [species]
TAPs:	Trans-Alaska Pipeline
TAS:	Tanacross Airfield Site
tcf:	Trillion cubic feet
TMP:	Travel Management Plan
UAF:	University of Alaska Fairbanks
Unit:	Game Management Unit
USC:	U.S. Code
USDA:	United States Department of Agriculture
USFWS:	U.S. Fish and Wildlife Service
USGS:	U.S. Geological Survey
UTV:	Utility Terrain Vehicle
VRI:	Visual Resource Inventory
VRM:	Visual Resource Management
WAMCATS:	Washington-Alaska Military Cable and Telegraph System
WMCH:	White Mountains caribou herd
WMP:	Watershed Management Plan
WSR:	Wild and Scenic River [Fortymile WSR]
WSR Act:	Wild and Scenic Rivers Act

Glossary

Glossary

17(d)(1) withdrawal:

A withdrawal made under the authority of section 17(d)(1) of the Alaska Native Claims Settlement Act for study to determine the proper classification of the lands and to determine the public values of the lands which need protection.

aircraft:

Fixed-wing and rotary wing aircraft.

Alaska National Interest Lands Conservation Act (ANILCA):

A law passed in 1980 designating 104 million acres for conservation by establishing or expanding national parks, wildlife refuges, wild and scenic rivers, wilderness areas, forest monuments, conservation areas, recreation areas, and wilderness study areas to preserve them for future generations.

Alaska Native Claims Settlement Act (ANCSA):

A law passed by Congress in 1971 to settle aboriginal land claims in Alaska. Under the settlement the Natives received title to a total of over 44 million acres, to be divided among some 220 Native villages and 12 Regional Corporations established by the act. The corporations shared in a payment of $962,500,000.

all-terrain vehicle (ATV):

A wheeled vehicle other than a snowmobile that is defined as having a curb weight of 1,000 pounds or less, maximum width of 50-inches or less, steered using handlebars, travels on three or more low-pressure tires, and has a seat designed to be straddled by the operator.

anadromous:

Anadromous fish are those which live most of their lives in the sea, but return to fresh water to spawn. Anadromous streams are those which support fish species that migrate between freshwater and marine waters, such as salmon.

anthropogenic:

Effects, processes, objects, or materials are those that are derived from human activities, as opposed to those occurring in natural environments without human influences.

Arctic Circle:

The invisible circle of latitude on the earth's surface at 66°33' north, marking the southern limit of the area where the sun does not rise on the winter solstice, December 21 or set on the summer solstice, June 21.

Area of Critical Environmental Concern (ACEC):

An area within the public lands where special management attention is required to protect important historic, cultural, or scenic values, fish and wildlife or natural systems or processes, or to protect life and safety from natural hazards.

artifact:

An object that was made, used, and/or transported by humans that provides information about human behavior in the past. Examples include pottery, stone tools, and bones with cut marks.

avoidance, mitigation:

Avoiding the impact altogether by not taking a certain action or parts of an action. (40 CFR 1508.20) (e.g. May also include avoiding the impact by moving the proposed action to a different time or location.)

best management practices (BMP):

A suite of techniques that guide, or may be applied to, management actions to aid in the achieving of desired outcomes.

casual use (recreation):

Noncommercial or nonorganized group or individual activities on public land. Casual use does the following: complies with land use decisions and designations, does not award cash prizes, is not publicly advertised, poses minimal risk for damage to public land or related water resources, and generally requires no monitoring.

cave:

A cave is defined as any naturally occurring void, cavity, recess, or system of interconnected passages occurring beneath the surface of the Earth or within a cliff or ledge large enough to permit an individual to enter, whether or not the entrance is naturally formed or human-made (FCRPA, Sec. 3(1)).

Code of Federal Regulations (CFR):

A codification of the general and permanent rules published in the *Federal Register* by the Executive Departments and agencies of the federal government. The Code is divided into 50 titles which represent broad areas subject to federal regulation. Each volume of the Code is revised at least once each year and issued on a quarterly basis.

commercial recreational use:

Recreational use of public lands and related waters for business or financial gain. When any person, group, or organization makes or attempts to make a profit, receive money, amortize equipment, or obtain goods or services, as compensation from participants in recreational activities occurring on public lands, the use is considered commercial. An activity, service, or use is commercial if anyone collects a fee or receives other compensation that is not strictly a sharing of, or is in excess of, actual expenses incurred for the purpose of the activity, service or use (such as guides, outfitters, and air taxi operators).

compensatory mitigation:

Compensating for the impact by replacing or providing substitute resources or environments. (40 CFR 1508.20)

compensatory mitigation projects:

Specific, on-the-ground actions (mitigation measures) to improve habitats (e.g., chemical vegetation treatments)

compensatory mitigation sites:

The durable areas where compensatory mitigation projects will occur.

Conservation System Unit (CSU):

ANILCA defines CSU as any Alaska unit of National Park System, National Wildlife Refuge System, National Wild and Scenic Rivers Systems, National Trails System, National Wilderness Preservation System, or a National Forest Monument. Within the planning area, CSUs managed by the BLM include Birch Creek, Beaver Creek, and the Fortymile wild and scenic rivers.

conservation watershed:
A watershed in which processes and functions occur in a relatively undisturbed and natural landscape setting.

continental-subarctic:
North of the humid continental climate, from about 50 to 70 degrees North, in a broad swath extending from Alaska to Newfoundland in North America and from northern Scandinavia to Siberia in Eurasia, lie the continental subarctic climates. These are regions dominated by the winter season, a long, bitterly cold period with short, clear days, relatively little precipitation (mostly in the form of snow), and low humidity. Mean monthly temperatures are below freezing for six to eight months, with an average frost-free period of only 50-90 days per year, and snow remains on the ground for many months. Summers are short and mild, with long days and a prevalence of frontal precipitation associated with maritime tropical air within traveling cyclones. Annual precipitation totals are mostly less than 50 centimeters (20 inches), with a concentration in the summer.

conveyed:
Title to land was transferred from one party to another. The United States conveys title to land to Native corporations by patent and interim conveyance (IC) and to the State of Alaska by patent and tentative approval (TA).

curb weight:
The weight of a vehicle with a full tank of fuel and all fluids full, but with no people or cargo loaded. “Curb weight” is synonymous with “wet weight” and “operating weight”.

designated trail:
A narrow section of developed linear travel way, with an approved designation for traversing by means of human-powered, stock, or off-road vehicle forms of transportation. Travel on designated trails allows a 100 foot wide travel way (50 foot either side of center line of trail). Motor vehicle designations include parking along designated routes and at facilities associated with designated routes when it is safe to do so and when not causing damage to resources. This provision recognizes that from a practical standpoint, one vehicle width from the edge of the route surface may be necessary to park a vehicle, allow another party to pass, perform a repair, to allow dispersed camping off the trail, and to allow enough area to navigate around obstacles until a trail can be repaired.

dispersed recreation:
Recreation activities of an unstructured type which are not confined to specific locations such as recreation sites. Example of these activities may be hunting, fishing, off-road vehicle use, hiking, and sightseeing.

dry weight:
The total weight of the vehicle without fluids.

endangered species:
An animal or plant species designated by the U.S. Fish and Wildlife Service to receive federal protection status because the species is in danger of extinction throughout all or a significant portion of its natural range.

environmental impact statement (EIS):

A detailed statement of a given project's environmental consequences, including unavoidable adverse environmental effects, alternatives to the proposed action, the relationship between local short-term uses and long-term productivity, and any irreversible or irretrievable commitment of resources.

environmental justice:

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies.

Essential Fish Habitat (EFH):

Essential Fish Habitat means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is defined by the Magnuson-Stevens Fishery Conservation and Management Act (Public Law 94-265).

executive order:

A rule or order issued by the President and having the force of the law.

Federal Land Policy and Management Act (FLPMA):

A law passed in 1976 to establish public land policy, guidelines for its administration, and provide for the management, protection, development, and enhancement of the public lands.

***Federal Register*:**

A daily publication that reports Presidential and federal agency documents.

fire frequency:

The reoccurrence of wildland fire in a given area over time. Also referred to as fire cycle.

fire regime:

A description of the patterns of wildland fire occurrences, frequency, size, severity, and, sometimes, vegetation and fire effects, in a given area or ecosystem. A fire regime is a generalization based on wildland fire histories at individual sites. There are five standard fire regimes:

- Fire Regime I, with a fire frequency of 0-35 years, surface fire to mixed fire type.
- Fire Regime II, with a fire frequency of 0-35 years frequency, stand replacement fire type.
- Fire Regime III, with a fire frequency of 35-100+ years, with a mixed fire type.
- Fire Regime IV, with a fire frequency of 35-100+ years, with a stand replacement fire type.
- Fire Regime V, with a fire frequency of 100+ years, with a stand replacement fire type.

Fire Regime Condition Class (FRCC):

(1) An interagency, standardized tool for determining the degree of departure from reference condition vegetation, fuels, and disturbance regimes. Assessing FRCC can help guide management objectives and set priorities for treatments.

(2) A classification of the amount of departure from the natural fire regime, based on a relative measure describing the degree of departure from the historical natural fire regime. This departure results in changes to one (or more) of the following ecological components: vegetation characteristics (species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated disturbances (e.g., insect and disease mortality, grazing, and drought).

- Condition Class 1: Within the natural (historical) range of variability of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances.
- Condition Class 2: Moderate departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances.
- Condition Class 3: High departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances.

fire return interval:

The number of years between two successive wildland fire events for a given area.

fire severity:

The degree to which a site has been altered or disrupted by wildland fire; loosely, a product of fire intensity and residence time. In Alaska, fire severity refers to the amount of organic layer removed by a wildland fire event.

game retrieval:

Retrieval of legally harvested big game animals off of a designated trail is allowed within designated areas (Frontcountry and Middlecountry Zones only) and within the OHV limitations for the area. Individuals must have a punched harvest ticket. Up to 3 ATVs may participate in the retrieval of the legally harvested big game. Retrieval of big game may not exceed one mile from the designated trail. Legally harvested big game must be retrieved within 24 hours.

gross vehicle weight rating (GVWR):

The total weight of the vehicle plus the maximum loaded carrying capacity of the vehicle as specified by the manufacturer (i.e., GVWR = weight of vehicle + fuel + passengers + cargo, as per manufacturers limitations). Pull-behind trailers are not included in the GVWR calculation for the vehicle.

High Priority Restoration Watershed:

Restoration watersheds that are priority areas for active restoration practices. Management activities in these areas are designed to accelerate the development of self-sustaining, ecologically healthy riparian and aquatic ecosytems.

In-kind, mitigation:

In-kind mitigation is the replacement or substitution of resources or values that are of the same type and kind as those impacted. (e.g. greater sage-grouse winter habitat is lost, and greater sage-grouse winter habitat is enhanced or conserved.).

invasive species:

Organisms that have been introduced into an environment where they did not evolve. Executive Order 13112 focuses on organism whose presence is likely to cause economic harm, environmental harm, or harms to human health. See also noxious weeds.

karst:

A type of topography resulting from dissolution and collapse of limestone, dolomite, or gypsum beds, characterized by closed depressions or sinkholes, caves, and underground drainages.

land status:

The legal standing of land within BLM boundaries. Land status includes private, military, State, State-selected, Native, Native-selected, and unencumbered public lands.

leasable minerals:

Minerals subject to exploration and development under leases, permits, and licenses under various mineral leasing acts. Leasable minerals include oil, gas, and coal.

lease:

A means of allowing long-term use of public lands without transferring ownership of that land.

locatable minerals:

Minerals subject to appropriation under the mining laws and 43 CFR 3809. Locatable minerals include base metals (e.g., copper, lead, and zinc), noble metals (e.g., silver and gold), nickel, iron, platinum group elements, bentonite, gem and semiprecious gemstones, and nephrite jade. See also leasable minerals.

loess:

Mixure of silt and very fine sand transported by wind from exposed sediment deposits of braided rivers. A wind deposited silt.

management framework plan (MFP):

A planning decision document prepared before the effective date of the regulations implementing the land use planning provisions of FLPMA. The MFP establishes, for a given area of land, land-use allocations, coordination guidelines for multiple-use, and objectives to be achieved for each class of land use or protection.

mechanized travel:

Moving by a mechanical device (e.g., bicycle) not powered by a motor.

Memorandum of Understanding (MOU), Memorandum of Agreement (MOA):

A formal, written agreement between organizations or agencies that presents the relationship between the entities for purposes of planning and management.

metalliferous:

Yielding or containing metal. metalliferous minerals include gold, silver, lead, copper, zinc, and nickel.

minimization, mitigation:

Minimizing impacts by limiting the degree or magnitude of the action and its implementation. (40 CFR 1508.20)

motorcycle:

Motorized vehicles with two tires and with a seat designed to be straddled by the operator. A motorcycle is capable of either on- or off-highway use.

motorized vehicles:

Vehicles that are propelled by motors or engines, such as cars, trucks, off-highway vehicles (OHV), motorcycles, and snowmobiles.

multiple-use:

Management of all the various renewable surface resources so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output. (43 U.S.C. sec. 1702(c)).

National Environmental Policy Act of 1969 (NEPA):

An act mandating an environmental analysis and public disclosure of federal actions.

National Wild and Scenic Rivers System (NWSR):

A system of nationally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in a free-flowing condition. The system consists of three types of streams: 1) recreational—rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past, 2) scenic—rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads, and 3) wild—rivers or sections of rivers free of impoundments and generally inaccessible except by trails, with watersheds or shore-lines essentially Primitive and waters unpolluted.

Native-selected:

BLM lands that have been selected by a Native corporation under the ANCSA which gave Alaska Natives an entitlement of 44 million acres to be selected from a pool of public lands specifically defined and withdrawn by the Act for that purpose.

no action alternative:

The most likely condition expected to exist if current management practices continue unchanged. The analysis of this alternative is required for federal actions under the National Environmental Policy Act of 1969 (NEPA).

non-motorized travel:

Moving by foot, stock or pack animal, boat, or mechanized vehicle such as a bicycle.

noxious weed:

A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or nonnative, new, or not common to the U.S. See also invasive species.

off-highway vehicle (OHV):

Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: 1) any non-amphibious registered motorboat; 2) any military, fire, emergency, or law enforcement vehicle being used for emergency purposes; 3) any vehicle whose use is expressly authorized by the authorizing officer, or otherwise officially approved; 4) vehicles in official use; and 5) any combat or combat support vehicle when used for national defense (CFR 43 sec. 8340.05(a)). OHVs generally include dirt motorcycles, dune buggies, jeeps, four-wheel drive vehicles, snowmobiles, and ATVs. OHV is synonymous with Off-Road Vehicle (ORV), Utility Type (or Terrain) Vehicle (UTV), and All Terrain Vehicle (ATV). Aircraft are not OHVs.

OHV area designations:

Used by federal agencies in the management of OHVs on public lands. Refers to the land use planning decisions that permit, establish conditions, or prohibit OHV activities on specific areas of public lands. All public lands are required to have OHV designations (43 CFR 8342.1). The CFR requires all BLM-managed public lands to be designated as "open," "limited," or "closed to off-road vehicles," and provides guidelines for designation. The definitions of open, limited, and closed are provided in 43 CFR 8340.0-5 (f), (g), and (h), respectively.

- Closed: Motorized vehicle travel is prohibited in the area. Access by means other than motorized vehicle is permitted. Areas are designated closed if closure to all vehicular use is necessary to protect resources, promote visitor safety, or reduce use conflicts.
- Open: Motorized vehicle travel is permitted year-long anywhere within an area designated as "open" to OHV use. Open designations are used for intensive OHV use areas where there are no special restrictions or where there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross-country travel.
- Limited: Motorized vehicle travel within specified areas and/or on designated routes, roads, vehicle ways, or trails is subject to restrictions. The "limited" designation is used where OHV use must be restricted to meet specific resource management objectives. Examples of limitations include: number or type of vehicles; time or season of use; permitted or licensed use only; use limited to designated roads and trails; or other limitations if restrictions are necessary to meet resource management objectives, including certain competitive or intensive use areas that have special limitations.

organic layer, organic mat:

Layer on top of the soil consisting of dead and decaying leaves, branches, wood, and other plant parts.

out-of-kind, mitigation:

Out-of-kind is the replacement or substitution of resources or values that are not the same type and kind as those impacted, but are related or similar. (e.g. greater sage-grouse winter habitat is lost, but new greater sage-grouse nesting habitat is enhanced or conserved.)

outstandingly remarkable value (ORV):

As defined by the Wild and Scenic Rivers Act of 1968, an "outstandingly remarkable value" is the characteristic of a river segment that is judged to be a rare, unique, or exemplary feature that is significant at a regional or natural scale. Values can be recreational, scenic, geological, historical, cultural, biological, botanical, ecological, heritage, hydrological, paleontological, scientific, or research-related.

over-Snow vehicle:

An over-snow vehicle is defined as a motor vehicle that is designed for use over snow that runs on a track or tracks and/or a ski or skis, while in use over snow. An over-snow vehicle does not include machinery used strictly for the grooming of non-motorized trails.

paleontological:

Of or relating to past geological periods. Paleontological resources include fossils of shellfish, swamp forests, dinosaurs, and other prehistoric plants and animals, including both vertebrates and invertebrates, and direct evidence of their presence (tracks, worm burrows, etc).

particulates:

Fine liquid or solid particles such as dust, smoke, mist, fumes or smog, found in the air or emissions. PM2.5 is a measure of fine particles in the air.

permafrost:

Soil, sand, gravel, or bedrock that has remained below 32 degrees F. for two or more years. Permafrost features include: frost boils (accumulation of excess water and mud in subsurface materials during spring thaw which may break through the surface), hummock (a mound of broken ice projecting upward, formed by ice deformation), ice wedge (a build up of ice in frozen soil, that is wedge-shaped in cross-section), ice lenses (accumulation of ice in cavities and hollows in the soil), pingos (an arctic mound or conical hill, consisting of an outer layer of soil covering a core of solid ice), polygonal ground (a type of patterned ground in areas of ice wedges), and solifluction lobes (an isolated tongue-shaped feature formed by rapid solifluction (downhill movement of soil) on a slope).

permit:

A means of authorizing use of public lands in an equitable, safe, and enjoyable manner while minimizing adverse impacts and user conflicts. A permit does not transfer ownership of the land, it simply allows the permittee to use the land in a pre-determined fashion for a set amount of time.

personal watercraft:

An inboard engine vessel, usually driven by a jet-pump, that typically carries one to three persons, and is operated by a person sitting by straddling a seat, standing, or kneeling on the boat, rather than in the conventional manner of sitting below the gunwale of the boat.

pollutants:

Any substance introduced into the environment that adversely affects the usefulness of a resource or the health of humans, animals, or ecosystems.

popcorn:

Small coral-like formations found as a coating on the cave surfaces.

prescribed fire:

A fire purposefully ignited to meet specific objectives. Prior to ignition, a written, approved fire plan must exist and legal requirements must be met.

primitive road:

A linear route managed for use by four-wheel drive or high clearance vehicles. Primitive roads do not normally meet any BLM road design standards.

proper functioning condition (PFC):

Riparian habitats are at PFC when adequate vegetation, land form, or large woody debris is present to: 1) dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality, (2) filter sediment, capture bedload, and aid floodplain development, (3) improve floodwater retention and groundwater discharge, (4) develop root masses that stabilize streambanks against cutting action, (5) develop diverse ponding and channel characteristics to provide the habitat and water depth, duration, and temperature necessary for fish production, and other uses, (6) and support greater biodiversity (BLM 1998)

public land:

FLMPA (43 U.S.C. 1702) defines public land as land or interest in land owned by the U.S. and administered by the Secretary of the Interior through the BLM without regard to how the U.S. acquired ownership, except land located on the Outer Continental Shelf, and land held for the benefit of Native Americans, Aleuts, and Eskimos. ANILCA (43 U.S.C. 1618) defines public lands as land situated in Alaska which, after the date of the enactment of this Act, are federal lands, except a) land selections of the State of Alaska which have been tentatively approved or validly selected under the Statehood act, b) land selections of a Native corporation made under ANCSA which have not been conveyed, unless such selection is determined to be invalid or is relinquished and, c) lands referred to in section 19(b) of ANCSA.

public land order (PLO):

Congressional or secretarial orders defining withdrawals of public lands by statute or secretarial order from operation of some or all of the public land laws.

public use:

This category of cultural resource use may be applied to any cultural property in the planning area found to be appropriate for use as an interpretive exhibit or for related educational and recreational uses by the public. This category may also be applied to historic features such as Fort Egbert Historic Site.

R.S. 2477:

A provision originally part of the 1866 Mining Act that states in its entirety, “The right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted.” In 1873, the provision was separated from the Mining Act and reenacted as Revised Statute (R.S.) 2477. In 1938, it was recodified as 43 U.S.C. Section 932. FLPMA repealed both the 1866 Mining Act and R.S. 2477, but all rights-of-way that existed on the date of the repeal (October 21, 1976) were preserved under 43 U.S.C. Section 1769. The State of Alaska recognizes approximately 650 R.S. 2477 routes throughout the State. The assertion of these routes has not been recognized and current BLM policy is to defer any processing of R.S. 2477 assertions except where there is a demonstrated and compelling need to make a determination.

R&PP lease:

A lease issued by the federal government under the R&PP Act for use of public lands to serve community and recreational purposes on such as parks and cemetery.

record of decision (ROD):

A public document associated with an Environmental Impact Statement (EIS) that identifies all alternatives, provides the final decision, the rationale behind that decision, and commitments to monitoring and mitigation.

recreation activity management plan (RAMP):

An activity level or step-down plan to develop more specific management guidelines for a special recreation management area.

Recreation and Public Purposes (R&PP) Act:
An act authorizing the sale or lease of public lands for recreational or public purposes to State and local governments and to qualified non-profit organizations.

rectify, mitigation:
Rectifying the impact by repairing, rehabilitating, or restoring the affected environment. (40 CFR 1508.20)

reduce or eliminate over time, mitigation:
Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action. (40 CFR 1508.20)

Research Natural Area (RNA):
An area that is established and maintained for the primary purpose of research and education because the land has one or more of the following characteristics: 1) a typical representation of a common plant or animal association; 2) an unusual plant or animal association; 3) a threatened or endangered plant or animal species; 4) a typical representation of common geologic, soil, or water features; or 5) outstanding or unusual geologic, soil, or water features. Uses of RNAs are defined in 43 CFR 8223.1.

residual impact:
Impacts from a land-use authorization that remain after applying avoidance, minimization, rectification, and reduction/elimination measures; also referred to as unavoidable impacts.

restoration watershed:
A watershed in which biological and physical processes and functions do not reflect natural conditions because of past and long-term human caused land disturbances.

right-of-way (ROW):
The legal right to pass over another owner's land, or the area over which a right-of-way exists.

right-of-way (ROW) avoidance area:
Areas identified in a resource management plan where location of rights-of-way is to be avoided. These areas may be available for location of rights-of-way with special stipulations.

right-of-way (ROW) exclusion area:
Areas identified in a resource management plan which are not available for location of rights-of-way under any conditions.

Riparian Conservation Areas (RCAs):
Riparian conservation areas (RCAs) are specific conservation watersheds that contain the highest fisheries and riparian resource values within the planning area. They are 6th level watersheds that the BLM has identified as priority habitats for fish and aquatic species. These watersheds have processes and functions that occur in a relatively undisturbed and natural landscape setting. Hydrologic function, such as sediment amounts and stream flow regimes resulting from disturbance, are within a natural range of frequency, duration, and intensity. In these watersheds, riparian-dependent resources receive primary emphasis and management activities are subject to specific management decisions.

road:
A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.

scientific use:
This category of cultural resource use may be applied to any cultural property in the planning area available for consideration as the subject of scientific or historical study at the present time, using currently available research techniques. Study includes methods that may result in the property's physical alteration.

scoping:
The process used to determine, through public involvement, the range of issues that the RMP should address.

sensitive species:
Those wildlife, fish, or plant species designated by the BLM Alaska State Director, usually in cooperation with the State agency responsible for managing the species, as sensitive. They are: 1) species under status review by U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service; 2) species whose numbers are declining so rapidly that federal listing may be necessary; 3) species with typically small and widely dispersed populations; or 4) species inhabiting ecological refugia or other specialized or unique habitats.

seral:
Relating to ecological communities where all successional stages of biotic development are represented.

snowmachine, snowmobile:
A motorized vehicle that is designed for use over snow that runs on a track or tracks and uses a ski or skis for steering, has a curb weight of 1,000 pounds or less, maximum width of 50-inches or less, steered using handlebars, and has a seat designed to be straddled by the operator. A snowmobile does not include machinery used strictly for the grooming of non-motorized trails.

special forest products:
Any "non-timber" forest resource. Special forest products may include: bark, boughs, burls, floral greenery, mushrooms, sap, wild berries, and Christmas trees.

Special Recreation Management Area (SRMA):
Areas where the management emphasis is on recreation, though other resource uses and development are allowed.

special recreation permit:
A means of authorizing recreational uses of public lands and waters. Special recreation permits are issued for specific recreational uses as a means to manage visitor use, protect natural and cultural resources, and provide a mechanism to accommodate commercial recreational uses. There are four types of permits: commercial, competitive, organized groups/events, and individuals or groups in special areas.

Special Status Species:
Special Status Species include the following: endangered species, threatened species, proposed species, candidate species, state-listed species, and BLM Alaska sensitive species.

State-selected:
Formerly unappropriated and unreserved public lands that were selected by the State of Alaska as part of the Alaska Statehood Act of 1958 and Alaska National Interest Lands Conservation

Act (ANILCA) of 1980. Until conveyance, State-selected lands outside of National Park system lands or National Wildlife refuges will be managed by the BLM. ANILCA allowed for overselection by the State by up to 25 percent of the entitlement (sec. 906 (f)). Therefore, some State-selected lands will eventually be retained in long-term federal management.

subsistence/subsistence use:
Relying on fish, wildlife and other wild resources for food, shelter, clothing, transportation, handicrafts, and trade. An Alaskan resident living in a rural area may participate in federal subsistence harvest on certain unencumbered BLM lands.

succession:
The replacement in time of one plant community with another. The prior plant community (or successional stage) creates conditions that are favorable for the establishment of the next community.

sustained yield:
The achievement and maintenance in perpetuity of a high-level annual or regular output of the various renewable resources of the national forests without impairment of the productivity of the land. (43 U.S.C. sec. 1702(h)).

thermokarst:
Ground subsidence due to the thawing of permafrost.

threatened species:
A designation by the U.S. Fish and Wildlife Service when a plant or animal is likely to become endangered throughout all or a specific portion of its range within the foreseeable future.

traditional use:
This category of cultural resource use may be applied to any cultural property in the planning area known to be perceived by Alaska Natives as important in maintaining their cultural identity, heritage, or well-being (such as Joseph Village and Cemetery).

trail:
Linear routes managed for human-powered, stock, or off-road vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

Travel Management Area (TMA):
Polygons or delineated areas where travel management (either motorized or non-motorized) needs particular focus. These areas may be designated as open, closed, or limited to motorized use and will typically have an identified or designated network of roads, trails, ways, and other routes that provide for public access and travel across the area. All designated travel routes within TMAs should have a clearly identified need and purpose, and clearly defined activity types, modes of travel, and seasons or times for allowable access or other limitations.

travel management plan (TMP):
The document that describes the decisions related to the selection and management of the Transportation Network. This document can be an appendix to a Resource Management Plan (RMP), incorporated in activity implementation plan (such as a Recreation Implementation Plan), or a stand alone document after development of the RMP.

unencumbered/unencumbered BLM lands:

Public lands that have not been selected by the State of Alaska or Native organizations. These lands will be retained in long-term federal management.

utility type (or terrain) vehicle (UTV):

Any recreational motor vehicle other than an all-terrain vehicle, motorcycle, or snowmobile designed for and capable of travel over unpaved roads, traveling on four or more low-pressure tires, a curb weight of 1,500 pounds or less, and maximum width is 64 inches or less. Utility type vehicles do not include vehicles specially designed to carry a person with disabilities.

visual resource management (VRM):

A means of managing visual resources by designating areas as one of four classes: Class I– maintaining a landscape setting that appears unaltered by humans; Class II– designing proposed alterations so as to retain the existing character of the landscape; Class III– designing proposed alterations so as to partially retain the existing character of the landscape; and, Class IV– providing for management activities which require major modifications of the existing character of the landscape.

Wild and Scenic River, Wild River:

A river that is part of the National Wild and Scenic River System. In Alaska, most Wild and Scenic Rivers (WSR) were designated by ANILCA. There are three of these rivers in the planning area: Beaver Creek, Birch Creek, and Fortymile River. See also National Wild and Scenic Rivers System.

wilderness characteristics:

These attributes include the area's size, its apparent naturalness, and outstanding opportunities for solitude or a Primitive and unconfined type of recreation. They may also include supplemental values.

wildfire:

Unplanned ignitions or prescribed fires that are declared wildfires. Wildfires may be managed to meet one or more objectives as specified in the Resource Management Plan and these objectives can change as the fire spreads across the landscape.

wildland fire:

Any nonstructural fire that occurs in vegetation or natural fuels. Wildland fire includes prescribed fire and wildfire.

withdrawal:

Federal land set aside and dedicated to a present, governmental use; public land set aside for some other public purpose, e.g., pending a determination of how the land is to be used; an action approved by the Secretary or a law enacted by Congress that closes land to specific uses under the public land laws (usually sale, settlement, location, and entry), or limits use to maintain public values or reserves area for particular public use or program, or that transfers jurisdiction of an area to another federal agency. Usually enacted by a public land order or legislation.

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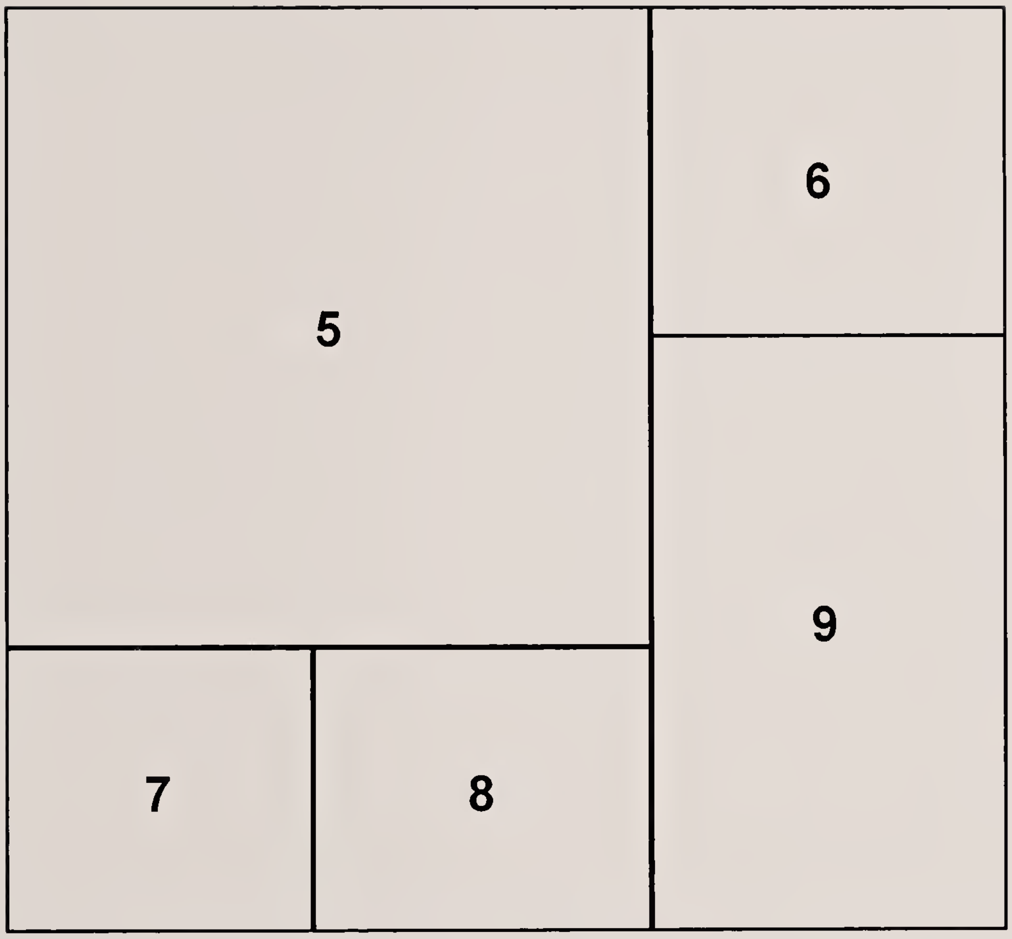

BLM Back Cover Photos:

5. Two caribou bulls running, Steese National Conservation Area, Alaska.
6. Checking set net near the village of Fort Yukon, Alaska. Photo by Alaska Department of Fish and Game.
7. Arctic Grayling fish assessment, Preacher Creek, Alaska
8. OHV rider on the Quartz Creek Trail, White Mountains National Recreation Area, Alaska.
9. Sled dogs at Caribou Bluff Cabin, White Mountains National Recreation Area, Alaska.